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# ***JPRS Report***

## **Soviet Union**

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No 8, August 1988

# Soviet Union

## MILITARY HISTORY JOURNAL

### No 8, August 1988

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13 February 1989

[The following is a translation of the Russian-language monthly journal VOYENNO-ISTORICHESKIY ZHURNAL published in Moscow. Refer to the table of contents for a listing of any articles not translated.]

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MILITARY HISTORY JOURNAL

No 8, August 1988

**Indoctrinate in Revolutionary, Military Traditions**  
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ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 3-9*

[Article by Maj Gen V.P. Khrobostov, candidate of historical sciences: "Indoctrinate in Revolutionary and Military Traditions." Words/Passages in boldface/italics as published]

[Text] Revolutionary and military traditions hold an important place in carrying out the tasks of communist indoctrination of the military. These were born in fierce class battles for liberty and in the course of building socialism and they are followed and safeguarded by the Soviet people. In opening a memorial plaque to the fighters of the revolution on 7 November 1918, V.I. Lenin said: "Let us honor the memory of the October fighters by swearing before their monument to follow in their footsteps and to imitate their intrepidity and their heroism."<sup>1</sup>

Loyalty to this Leninist legacy has survived today. The CPSU is the heir of the revolutionary spirit and all the finest accumulated in the past. Its enormous revolutionary experience has become that connecting link which brings together the past heroic achievements with the present large-scale ones. "Having set out in April 1985 on a new course," commented the General Secretary of the CPSU Central Committee, M.S. Gorbachev, in a report at the 19th All-Union Party Conference, "the CPSU has affirmed that precisely it is the bearer of the program goals of society and it is precisely the party which is the political force which can lead the country along the path of renewal."<sup>2</sup>

Marxist-Leninist teachings comprise the ideological basis of revolutionary traditions. Their inexhaustible sources lie in vital creative patriotism and proletarian socialist internationalism. These have developed due to the constant, daily leadership of the CPSU.

The military traditions of the Armed Forces are inseparable from the revolutionary traditions of the Communist Party and our people. They all arose and were strengthened in the fire of three revolutions, in the heroic struggle of V.I. Lenin and the party established by him for the victory of October. "In the flames of the Civil War," emphasized the Candidate Member of the Politburo of the CPSU Central Committee and USSR Minister of Defense, Army Gen D.T. Yazov, in his report "Seventy Years on Guard for Socialism and Peace," "were born the glorious military traditions of the Soviet Armed Forces. High military skill, loyalty to military duty, steadfastness and valor, which over the ages have marked the defenders of the homeland and have been

multiplied by a profound awareness of the great truth of the cause of the revolution have produced a fusion of particular strength."<sup>2a</sup>

These traditions were strengthened and added to during the years of the Great Patriotic War and have been continued under present-day conditions during intense military service, exercises, cruises and flights as well as in standing alert duty. In preserving and adding to the heroic traditions of the elder generations, the military, indoctrinated by the Communist Party in a spirit of the immortal Leninist legacy, are doing everything to successfully carry out the honorable and important task set by the 27th CPSU Congress for the Armed Forces, that is, to securely defend the peaceful life of the Soviet people.

The defenders of the cause of October during the years of the Civil War went boldly into battle against the enemies. Loyal to revolutionary duty, they unstintingly defended Soviet power. The following facts convincingly show the courage and valor of our soldiers during that period. For heroism shown in battle against the enemy, 355 troop formations, separate units and military schools received honorary revolutionary colors and combat orders. Around 15,000 men and commanders received the Order of the Red Banner. Many of them were decorated twice and three times while the military leaders V.K. Blyukher, S.S. Vostretsov, Ya.F. Fabritsius and I.F. Fedko received them four times.

Subsequent generations of the motherland's defenders inscribed their own pages in the combat chronicle of the Armed Forces. The mass heroism of the Soviet people was particularly apparent during the years of the Great Patriotic War. Some 11,633 soldiers received the title of Hero of the Soviet Union, 115 received them twice and 3 received the medal three times. Over 7 million persons were decorated with orders and medals for military distinguishment on the fronts.<sup>3</sup> Some 2,582 men became full holders of the Order of Glory.

As a result of the victory of the Great October Socialist Revolution, for the first time in history the workers of our land acquired a true fatherland and a new, higher type of patriotism was established. The motherland which, in the words of V.I. Lenin, had been won away by the Bolsheviks from the rich for the poor, from the exploiters for the workers, had become for them a hundred-fold dearer than before.

The citizen of the Soviet nation had something to love it for and something to be proud of! "Dear, bright motherland! All our infinite filial love for you, all our thoughts are with you." These expressive words belong to Mikhail Sholokhov and they reflected the thoughts and feelings of the true patriots and each soldier.

The Soviet man is the true master of his fatherland. The documents of the 27th CPSU Congress emphasize the necessity for a further improvement in patriotic indoctrination. The Army and Navy collectives had great

opportunities for this. For the designated purposes, it is essential first of all to arm the men with the ideas of the party and thoroughly explain its policy. "Recent years have been vivid proof of the greater interest in the past on the part of the broadest strata of the population. The historical awareness of the people more and more is being shaped upon the principles of scientific historicism and truth. At the same time, there has also been speculation over the concept of patriotism. A patriot is not someone who shouts loudly about a supposed 'internal threat' to socialism or one, who in siding with certain political extremists, everywhere searches for internal enemies, 'counterrevolutionary nations' and so forth. A patriot is one who, without fearing any difficulties, acts in the interests of the nation and for the good of the people. We need a patriotism which is not contemplative, not verbal, but creative. Not jingoistic and rough but rather a patriotism of socialist changes. A patriotism coming not only from a love of the 'small motherland' but permeated with pride for the accomplishments of the great motherland of socialism."<sup>4</sup>

Soviet patriotism demands of a man ideological maturity and high morality. This is why the commanders, the political bodies, the party and Komsomol organizations should see to it that love for the motherland be not restricted in the men to verbal assurances of carrying out their duty to it but be manifested in concrete deeds and actions.

On one of the submarines the sailors were offered to write a composition on the subject "What Does It Mean to Be a Patriot?" In this a majority of the crew members pointed out that to be a patriot today means to constantly strengthen the economic and defense might of the nation, to defend it against the encroachments of the imperialist aggressors and increase combat readiness in every possible way. Characteristically, each man carried out his duties on the cruise with a feeling of high responsibility. The submarine successfully carried out all the combat training missions.

There is the old military tradition in our Armed Forces of the love of the Soviet military for their unit, for their ship and loyalty to the colors (flag). "Much time has passed since," Hero of Socialist Labor, PO (Res) G. Furryayev to his unit, "I completed military service, but even now I recall my home company and my commanders as the most precious thing that happened in all my life. What a school this was! Only in service, on duty, did I feel myself an adult, physically tempered, spiritually mature, tempered in the fight against difficulties, only here did I experience the force of military comradeship. This came in very usefully in subsequent years...."

Certainly a feeling of affection for one's unit does not come about automatically. It is indoctrinated by the entire way of army life and by the efforts of the commanders, the political workers, the party and Komsomol organizations. Good material for this can come from the feats of the unit's men in the last war and each fact of the

manifesting of courage and valor by the personnel in battle and in daily combat training. It is exceptionally important that all the officers show a personal example of how to respect the honor and glory of the home unit and add to its successes. At the same time, it must not be forgotten that attempts "not to wash your laundry in public" and to conceal shortcomings in service and military training have nothing in common for concern for the honor of one's regiment or ship. Only high exactingness, implacability for anything negative and a true struggle for successes and not for their appearance can be crowned by achieving the cherished goal.

The history of our Armed Forces provides many examples of the loyalty of Soviet soldiers to their colors.

The indoctrination of the personnel of the units and ships in a spirit of loyalty to the colors is an important element of ideological work. The commanders, the political workers, the party and Komsomol activists should see to it that each serviceman has a good knowledge of the history of his unit: its combat record, the heroes and have a full understanding of why they were decorated with high governmental awards. The units and ships employ many forms of work in indoctrinating the men in a loyalty to the colors. This includes meetings with war veterans, fellow servicemen, trips to sites of military glory, special-subject evenings, reader conferences, debates and film festivals.

People in uniform are united and brought together not only by service itself and not only by the commonness of tasks being carried out, but also by a constant helping hand, a desire to aid one another and by a readiness to caution and restrain a fellow serviceman from an incorrect step. Friendship and troop comradeship, mutual aid and support in battle have always been one of the best traditions of our troops, a standard of their conduct and an inexorable law of life. If in some military collective there is a man who shows disrespect for comrades and who deviates from the proper standards in relations with them, he should be decisively condemned by the entire collective.

Remaining loyal to this tradition until the end was Nikolay Anfinogenov who carried out his international duty in Afghanistan. In covering the retreat of comrades and having used up all his ammunition, Nikolay was encircled by the dushman. Having made certain that his commander and comrades were safe, with his last grenade he blew up himself and the nearby bandits. Thus, the man ensured that his company would move to better positions. Nikolay Anfinogenov was awarded the title of Hero of the Soviet Union posthumously.

The men respect the commander and protect him in battle. In precisely the same manner the commander is fond of his subordinates and values their health and life. Affirmation of this was the courageous deed of Capt N. Platonov who sacrificed himself for the sake of rescuing a subordinate. The officer was appointed the leader at a



training area for throwing live grenades. One of the men who was performing the exercise, having pulled out the pin, became muddled, he relaxed his fingers and released the lever. There was the dull clicking of the detonator pellet. Just seconds remained until the explosion and the soldiers stood there stunned. Capt Platonov grabbed the grenade from the man's hand and covered it with his body. He consciously went to a certain death in rescuing his fellow serviceman and his comrades.

Traditions are not only the memory of the heroic past but also a vital contact with it. For this reason, propagandizing the significant deeds of servicemen committed at present at tactical exercises, on the ranges, in flights and sea cruises, along with propagandizing military traditions is one of the most important tasks of the commanders, the political bodies, the party and Komsomol organizations. As facts show, this is all the more essential as certain men at times have a hazy notion of events of the glorious past and the no less glorious present.

The succession of generations means a continuation of traditions. The commanders, the political bodies, the party and Komsomol organizations must consider that propagandizing the heroic traditions is most effective when this is closely tied to the problems of the present and to explaining the tasks stemming from the decisions of the 27th CPSU Congress.

Activities in the area of indoctrinating the personnel in military traditions bring success in the instance that this is carried out thoughtfully and has a vital, creative nature. A meeting with frontline veterans or a talk in front of museum exhibits, a special-subject evening devoted to the colors, a morning of friendship and comradeship and the publishing of a journal—any of these or other forms of work widely employed in the units and on the ships require careful preparation. Every effort must be made to impel the young soldiers to a feat and evoke in them a desire to make their own contribution to the development of military traditions.

Among the many forms and methods of indoctrinating the personnel in revolutionary and military traditions one must set apart the political exercises and political information sessions. These aid the men in widely studying Lenin's ideas on the defense of the socialist fatherland, the heroic history of the Communist Party, the Soviet state and the Armed Forces, to explain the demands of the CPSU and the USSR Constitution on the armed defenders of the motherland and to become familiar with the achievements of the Soviet people in the economic and social development of the nation, its heroic past and the combat history of the Armed Forces, the formations, units and ships.

Of great importance are the museums and combat glory rooms in indoctrinating the men in military traditions. The materials assembled here describe the units, ships and subunits which were awarded honorific designators for particular service in combating the Nazi invaders.

The agitation and propaganda consider that the names of many towns, settlements, streets and squares perpetuate the revolutionaries, the men of the Army and Navy and the partisans. All of this is the tribute by grateful survivors to those who surrendered their lives for the motherland.

It is important to recall that propagandizing military traditions directly in the process of combat training has a positive effect on indoctrinating the men. For this purpose the field exercises and tactical drills should be conducted where battles occurred during the years of the Civil and Great Patriotic Wars. The descriptions of those who showed courage, steadfastness and valor in fighting for the freedom and honor of the Soviet motherland mobilize the men and the sergeants to zealous standing of duty and the excellent mastery of combat specialties. Each is clearly aware of himself as the heir and continuer of the glorious traditions and in the exercises endeavors to act with a maximum effort.

We should note the experience of indoctrinating personnel in various military traditions acquired in the Group of Soviet Forces in Germany, in the Leningrad, Belorussian and other military districts. On the territory of the military compounds here they have set up stands of Heroes of the Soviet Union who had come from the formation. Talks are conducted systematically with the men on the campaign record of the unit, the heroic deeds of fellow servicemen and the successes of the soldiers, sergeants and officers in military and political training. For the young recruits, the party and Komsomol activists organize talks with veterans. Their subjects vary, for example, "Outstanding Men—Worthy Continuers of the Glory of Heroes" and "The Unit Colors—The Symbol of Military Honor, Valor and Glory." Lecture cycles and special subject mornings are held on: "V.I. Lenin on Revolutionary Vigilance," "The Glory of the Fathers Shows Our Way" and "The People and Army Are United." The military tradition days are also successfully held. Here participants of the war, veterans of the Armed Forces, outstanding men in training and masters of military specialties speak constantly.

Film festivals, reader conferences on books dealing with the Great Patriotic War and the modern army are held regularly for propagandizing military traditions. Here they show the heroic nature of peacetime days, the success of the subunits and the experience of the outstanding men in training. Radio news, wall newspapers, combat leaflets and photograph collections tell about the best men and the pacesetters in the competition. In certain units the servicemen are issued special pamphlets on the campaign record of the unit. All of this evokes pride in the young men for their troop collective and gives rise to a desire to defend its honor and add to the traditions by outstanding training and exemplary service.

Becoming widespread in the troops and fleets are new initiatives and movements under the mottoes "Equal the

Heroes," "Hit the Target With the First Round, the First Burst, at Maximum Range," "For a Better Motorized Rifle (Tank) Company in Weapons Training" and many others. At a Komsomol meeting of the company where the legendary political instructor Hero of the Soviet Union V. Klochkov is entered on the rolls in perpetuity, they have raised the slogan "We Are Continuing and Adding to the Traditions of Our Fathers." The heirs of the glory of the 28 Panfilov heroes, in turning to all the men of the Soviet Armed Forces, have written: "Time moves inexorably away from the heroic feats of the frontline veterans and there are fewer and fewer veterans in service. It is our sacred duty to constantly study, continue and add to the military traditions of the Soviet Armed Forces, our district, fleet, division, regiment, ship and subunit. We urge all the men of the Army and Navy to do this."

The initiative of the Klochkov soldiers was approved by the Main Political Directorate of the Soviet Army and Navy. It has been supported in all the Komsomol organizations of the units and subunits. The initiative itself clearly expresses the profound respect of the army youth for the unprecedented feat of the people and their desire to learn from the elder generation the art of winning, steadfastness and heroism.

Recently, in the troops and fleets there has been a noticeable increase in the correspondence with the veterans of the units and ships and with the servicemen's parents who participated in the Great Patriotic War as well as with enterprises and institutions of learning named after heroes from the unit. In the Lenin rooms, following the results of the correspondence, stands and albums are made up of "Orders of the Frontline Veterans." Many army Komsomol organizations maintain permanent ties with the cities and population points where their unit was involved in its liberation and make excursions to the sites of military engagements.

The Lenin rooms are organizing military glory corners where they bring together materials on the feats of the men during the war years as well as the continuers of their glory in peacetime.

Also proven effective are the evenings of military glory, the courage lessons and oral magazines on the subjects: "Follow the Example of a Hero," "The Colors Describe," "The Veterans Say" and others. Lectures, reports, talks, Lenin readings and Lenin lessons are given on the defense of the socialist fatherland, they discuss war memoir literature and films showing the heroism of the Soviet people. Measures with a high emotional pitch and great ideological content leave a profound trace in the memory of the personnel and are of great indoctrinational significance.

Here, for example, is how they conducted the special-subject evening "Let Us Not Let Down the Glory of Our Fathers, Let Us Add to the Traditions of the Fleet" on one of the ships. Before the start of the evening, the men

received a sort of psychological tuning to an interesting, lively exchange of opinions. They performed songs from the times of the Civil and Great Patriotic Wars and they became familiar with the materials of the stands "An Army Born in the Flames of Revolution and Tempered in Battle" and "The Paths of the Fathers Are the Roads of Their Sons" dedicated to the participants in the Great Patriotic War and the fathers of PO 2d Class V. Ponomarenko, PO 1st Class A. Uglov, Sr Sn A. Sepp and other men. These are men presently serving on the ship. And each could see that their sons were following the roads of their fathers and their example. Then began speeches by war veterans. Film fragments and recorded songs of the war years were illustrations of their memories. The outstanding men in military and political training and class specialists spoke with pride about the today of the ship and the glorious deeds of the crew. The evening evoked a vital interest among the sailors and was long remembered.

The commanders, the political bodies and the party organizations take into account that the traditions are living and increasing. For this reason they systematically propagandize the remarkable deeds of the servicemen today during tactical exercises, at the ranges and in performing special assignments proper due is given to the winners of the socialist competition and to the men who served in an exemplary manner and master expertly the combat equipment and weapons.

At present, when the process of restructuring is going on in the nation, the responsibility of a party member for the assigned area has immeasurably grown. Each communist should work more effectively than before, having understood the main thing: the restructuring concerns all spheres of activity. This requires a breaking of the old way of thinking and the elaboration of a new, more responsible and exacting approach to the job.

At present, the units and ships have developed a number of new forms and methods for training and indoctrinating the personnel. However, many commanders and political workers are still acting in the old manner, preferring a hands-off style of leadership, they conduct measures following obsolete routines and indoctrinate the men without considering the present.

As was pointed out by the Chief of the Main Political Directorate of the Soviet Army and Navy, Army Gen A.D. Lizichev, indoctrination in the requirements of the military oath and military regulations requires major adjustments. They have been written with the blood of generations. Unfortunately, in some places these are simply learned by rote. The indoctrinational effect from such exercises is miniscule. And are not here the sources of many negative phenomena in the army milieu? In training, it is essential to indoctrinate in the military man a feeling of respect for military service and pride for his profession, and inculcate a readiness at any moment to come to the defense of the socialist fatherland.<sup>5</sup> The way to this is constant active work in explaining the

requirements of the military oath and military regulations and vivid propagandizing of the examples of their exemplary execution both in wartime and in peacetime.

"The party and state," emphasized Comrade M.S. Gorbachev at the 27th CPSU Congress, "has endeavored and is endeavoring that the Soviet military man—soldier and officer—in standing his difficult service, always feels the concern and attention of society and that our army be a school for indoctrinating civil responsibility, courage and patriotism."<sup>6</sup>

There is a broad range of indoctrinating the personnel in revolutionary and military traditions. The commanders, the political bodies and the party organizations feel that traditions are not only a memory of the heroic past but a vital link with it, an awareness of the responsibility for the revolutionary victory to the future. For this reason they systematically propagandize the significant deeds of the servicemen in our times and in the tactical exercises, on the ranges and in performing special assignments they pay proper due to the victors of the socialist competition and to the men who serve in an exemplary manner and who have mastered the combat equipment and weapons.

In preserving and adding to the heroic traditions of the older generation, the Soviet military, indoctrinated by the Communist Party in a spirit of the immortal Leninist legacy, are doing everything to successfully carry out the honorable task posed by the 27th CPSU Congress for the Armed Forces, that is, to securely defend the peaceful life of the Soviet people. Military traditions to not die. They are added to in daily military service of the men.

#### Footnotes

1. V.I. Lenin, PSS [Complete Collected Works], Vol 37, p 172.

2. *Pravda*, 29 June 1988.

2a. *Krasnaya zvezda*, 23 February 1988.

3. "Geroi Sovetskogo Soyuza. Istoriko-statisticheskii ocherk" [Heroes of the Soviet Union. Historical-Statistical Essay], Moscow, Voenizdat, 1984, p 190.

4. *Pravda*, 5 April 1988.

5. *Kommunist Vooruzhennykh Sil*, No 11, 1987.

6. "Materialy XXVII syezda KPSS" [Materials of the 27th CPSU Congress], Moscow, Politizdat, 1986, p 62.

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#### Development of Defensive Combat Tactics in First, Second Periods of Great Patriotic War

00010001b Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 8, Aug 88 (signed to press 25 Jul 88) pp 10-18

[Article, published under the heading "Soviet Military Art," by Maj Gen A.S. Gusev: "The Development of Defensive Combat Tactics During First and Second Periods of the Great Patriotic War"]

[Text] From the first day of the existence of the Soviet state, the idea of peace lay at the basis of its foreign policy. At the same time, it was assumed that "any attack on the socialist state of the workers and peasants would be driven off by the entire might of the armed forces of the Soviet Union, with the shifting of military operations [deystviya] to the territory of the attacking enemy."<sup>1</sup> This expressed the offensive principle in Soviet military strategy.

According to the prewar views, the defensive was viewed in a unity with the offensive. Its main goal was to force the advancing enemy to accept battle under disadvantageous conditions for it, to cause the enemy the greatest losses and ensure the possibility of our own going over to the offensive. Depending upon the conditions, the defensive could be positional or maneuvering.

The positional was aimed at holding terrain prepared for the defensive. This was to be antiartillery, antitank, capable of withstanding strong air actions, deeply echeloned, stubborn and active. It was required that the defensive be multiechelon, multitiered, deep and capable of stiffening resistance in depth.

A maneuvering defense was to be employed under conditions of absolute enemy superiority in personnel and equipment as well as in the event when it was necessary to maintain forces and gain time at the expense of losing a portion of the territory for preparing an offensive by our troops. This meant the conduct of successive battles on several previously designated lines. A maneuvering defensive after the troops reached the last line of retreat should develop into a positional one. For conducting it, it was recommended that the troops be echeloned. The first echelon should hold its line until the second was ready for battle on the subsequent line. After this the line could retreat to the next position.

With the start of the Great Patriotic War, defensive battles were conducted under conditions of insufficient technical equipping and manning of the Soviet troops and the absence of the requisite combat experience. The severe testing which the people and the army had to go through prevented the use in the first period of the war of one of the main provisions of prewar theory where instructions were given to establish a deeply echeloned defense which was strong in antitank, air and other terms and capable of combining tenacity and activeness of the



troops. Inherent to the defensive of this period, particularly in the summer of 1941, were numerous shortcomings, for example, the linearity in the troop positions, the low tactical densities of the forces, the presence of large intervals and exposed flanks in the troop configurations, the insufficient engineer organization of the terrain and weakness in antitank terms. Such defenses were unable to repulse the massed strikes by superior enemy tank and motorized infantry forces when air supremacy had also been seized.

An analysis of the combat actions of rifle divisions shows that they went over to the defensive in direct contact with the enemy and in a number of instances in the absence of a continuous front, in an uncertain situation, with the holding of advantageous areas by the Nazis; this forced our troops to fight stubbornly to hold their position.

In the second period of the war, regardless of the improved over-all operational-strategic [operativno-strategicheskaya] situation, the combat actions of the Soviet troops, in going over to the defensive under conditions of direct contact with the enemy, as before, involved great tension. This was particularly noticeable in reinforcing the captured staging areas on large water barriers. There were no substantial changes in the going over of the formations to the defensive in those battles where they had to repulse counterstrikes by superior enemy forces. Nevertheless, in the first period of the war, there was a trend toward reducing the depth of retreat by our troops and greater time for organizing the defensive. All of this along with their increased experience and skill created better conditions for preparing the subsequent one in the formations and units.

The battle task for a first-echelon division on the defensive consisted in repelling the enemy offensive and holding the occupied line and positions. According to the prewar views, such a division was given: the defensive zone, the main position of resistance and its forward edge, the procedure for the engineer organization of the terrain (antitank areas, alternate positions and intermediate lines), the times for occupying the defensive zone and for the readiness of the defenses, the tasks for the artillery, tanks, supporting aviation and reserves as well as measures of combat support.<sup>2</sup>

At the start of the war, the divisions were often given only a line (zone) which had to be held. But by the end of 1941, the content of the battle task, as a rule, began to correspond to the demands of the prewar regulations. During the 1942 summer-autumn campaign, particularly during the battle at Stalingrad, the rifle divisions were also given the axes for concentrating their main efforts.

A tendency to concretize the contents of the battle task could be noted in the second period of the war and this was reflected in the draft 1943 Field Manual and in troop combat practice. The orders of the corps commanders began to designate measures for defending the

boundary areas and the commanders responsible for these, the areas and sectors for concentrating the main efforts, the positions of the battle outposts and the procedure for the engineer organization of the terrain. This can be traced most clearly in the organizing of the defensive by the rifle divisions of the 13th, 6th Guards and 7th Guards Armies during the defensive fighting on the Kursk Salient.

An important element in the battle task was a clear definition of the width of the defensive zone and its depth in the rifle formations (see the Table). According to the prewar views, it was envisaged that a rifle division, in defending a zone 8 km wide, should have per kilometer of front more than one rifle battalion, 18 guns and mortars, 6-9 antitank guns and considering the reinforcements the density for guns and mortars should rise to 22-25 units and for tanks up to 3-6 units.

**Table: Width and Depth of Defensive Zones for Rifle Formations in First and Second Periods of the War**

Area of Defensive Actions	Formations	Width of Defensive Zone, km	Depth of Zone, km
At Volokolamsk (Nov 1941)	316rd*	14	3-4
At Naro-Fominsk (Nov 1941)	50rd	8	to 4
At Yefremov (Nov 1941)	137rd	8	—
At Stalingrad (Jul 1942)	33dGuardsrd	18	to 6
	181Guardsrd	15	to 8
	147rd	15	about 5
At Kursk (Jul 1943)	15rd	9	6
	81Guardsrd	9	5-7
	52Guardsrd	15	to 6

\* rd—Rifle Division

increasing the width of the defensive zone by the formations, the tactical densities declined sharply to 0.3-0.6 of a rifle battalion, 2-3 guns and mortars and 2-3 antitank guns while the enemy on the axes of the main thrust concentrated up to 2 infantry battalions, 60-100 guns and mortars and 50-70 tanks per kilometer of front.

The densities of forces on the defensive of the formations on the main axis during the second period of the war increased approximately 1.5-2-fold for infantry and tanks and 2-3-fold for artillery. While on the defensive at Stalingrad, per kilometer of front on the main axis there were 0.4-0.7 of a rifle battalion, 12-15 guns and mortars and 1-2 tanks, at Kursk the figures were: 0.7-1.1 of a rifle battalion, 40-48 guns and mortars and 3-4 tanks and SAU [self-propelled artillery mount]. On the secondary axes these indicators were significantly lower.



On the axis of the main enemy thrust, tactical densities in the course of the defensive fighting usually were increased quickly by maneuvering artillery and tanks from unattacked defensive sectors and from the reserve of the formation commanders. For example, in the zone of the 81st Rifle Division of the 13th Army on the Kursk Salient, the artillery density during the first day of fighting was brought up to 85 guns and mortars as well as 9 tanks per kilometer of front.

The formations, in being greater understrength at the outset of the war in terms of personnel and military equipment, were forced to go over to the defensive, as a rule, on a wide front which at times exceeded 30 km. Thus, in the defensive on the Western Dvina and Dnieper Rivers in July 1941, the rifle divisions defended zones of the following width: 46 km for the 153d Rifle Division, 20 km for the 73d Rifle Division, 20 km for the 18th Rifle Division, 25 km for the 53d Rifle Division, 35 km for the 102d Rifle Division and 20 km for the 154th Rifle Division.<sup>3</sup> The deep configuration of their battle formations corresponded to the requirements of the prewar regulations (Diagram 1), but this did not conform to actual combat capabilities. For this reason, in the course of the 1941 summer-autumn campaign, the formation commanders began to organize the defensive of the divisions in a single echelon with the assigning of a small reserve. Here they could employ up to 80-85 percent of the weapons in the fight for the forward edge and the first position. At the same time, due to the lack

of artillery, the number of infantry support groups was reduced and their strength weakened.

The ever-increasing number of troops and consideration of the combat experience in 1941 made it possible in the 1942 summer-autumn campaign to again echelon the battle formations in depth on the main axes and on the stabilized sectors of the front. Even in July 1942, the 13th and 189th Rifle Divisions of the 42d Army on the Leningrad Front and in July 1942, the 33d Guards and 181st Rifle Divisions of the 62d Army on the Stalingrad Front formed up a battle formation in two echelons with the assigning of general, tank and antitank reserves (Diagram 2). Such a configuration of the troops was brought about by the actions of the enemy which employed a large number of tanks in advancing on narrow sectors of the front and it was possible to combat these not only by the fire from the units defending the first and second positions but also due to the close cooperation between the echelons as well as the counterattacks from within the defenses. While in the defensive at Moscow the depth of the battle formations for the rifle divisions fighting on the main sectors did not exceed 3-4 km and at Stalingrad 4-5 km, at Orel and Kursk it reached 5-7 km, that is, by the summer of 1943 it had risen by more than 1.5-fold in comparison with 1941.

The increase depth in the configuration of the battle formations of the units and formations significantly increased the strength of our defenses, it made it possible

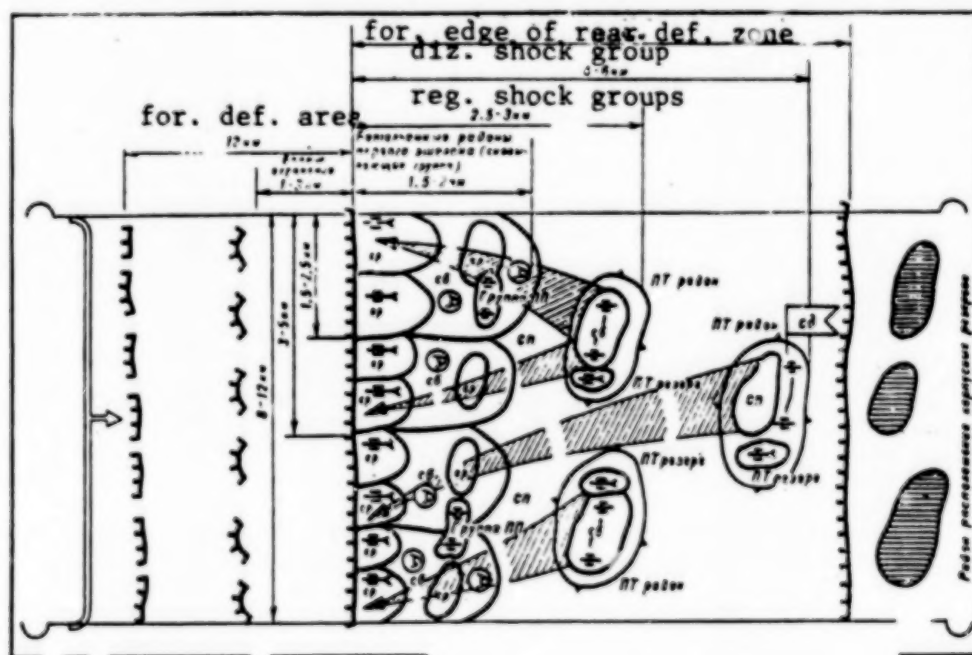
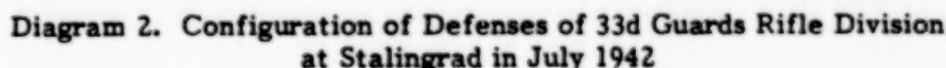


Diagram 1. Variation for Configuration for Rifle Division  
Battle Formation on Defensive According to PU-36



It must be pointed out that the development of the battle formations in depth was not a single return to what had gone on before. If, according to the prewar views, the build-up of efforts on the defensive was to be achieved by establishing a common reserve in the corps, subsequently this was to be achieved by a second echelon which in terms of strength was approximately 3-fold greater than a reserve. The presence of strong artillery groups, strong reserves and a mobile obstacle construction detachment in the rifle divisions made the defenses stronger and more active.

Significant changes occurred during the war years in the engineer organization of the defensive. In the summer and autumn of 1941, the tactical defenses of the Soviet troops usually included only a main zone some 3-4 km deep and this was a single position equipped with trenches for a rifle squad in a system of platoon, company and battalion defensive areas. At times such organization of the terrain was carried out in the positions of the second echelons of the regiments and divisions.

In the course of the defensive at Leningrad, Smolensk and particularly at Moscow, engineer organization of the defensive lines was constantly improved within the battalion defensive areas as well as the company and platoon strongpoints.

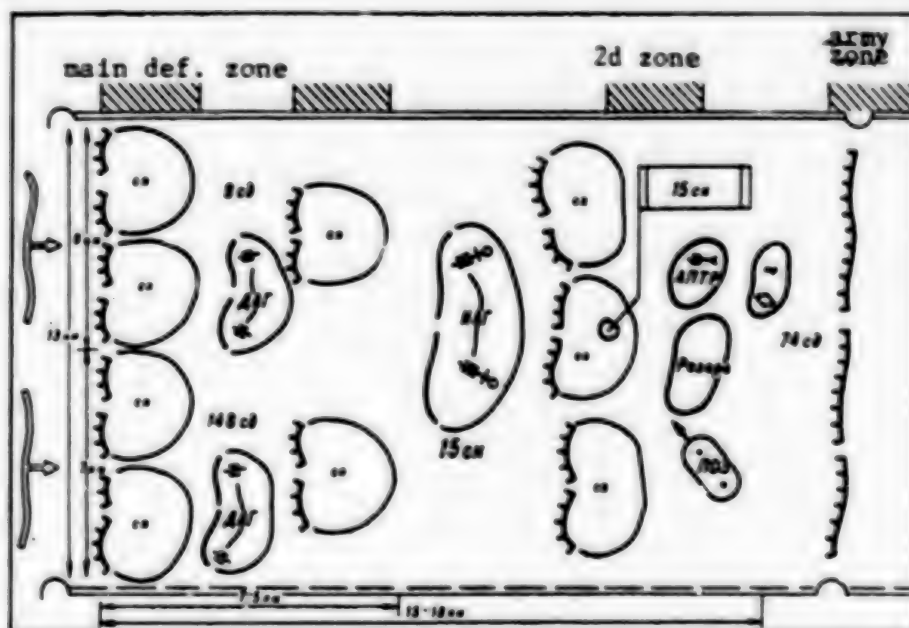


Diagram 3. Configuration of Battle Formation of XV Rifle Corps of 13th Army in Battle of Kursk (July 1943)

As combat experience was gained and as the front was stabilized on the individual sectors the trenches and firing positions began to be connected along the front and were thereby turned in essence into a trench with communications trenches running to the rear. These made it possible to better cover the personnel and weapons against enemy artillery and aviation as well as to maneuver them quickly and covertly along the front and in depth. The presence of the trenches combined with various types of obstacles made it possible with fewer forces to defend large areas and assign more troops to the second echelons.

In 1942, the second echelons of the regiments and divisions more frequently prepared battalion defensive areas. The tendency to provide two other positions in the main zone, in addition to the basic one, underwent further development.

The engineer organization of the tactical defensive zone during the second period was carried out according to the requirements of the 1943 Draft Field Manual and the Instructions of the General Staff on Reconnaissance and the Construction of Field Defensive Lines.

In contrast to the first period of the war, here they usually established two defensive lines, alternate positions, antitank areas and a system of mixed minefields.

The first position was the main one and designed to defeat the enemy ahead of the forward edge and in the closest depth (1-1.5 km). Here were the first-echelon

battalions of the rifle regiments. Usually the position consisted of one-two and sometimes three trenches. The first trench in essence was the forward edge of the main defensive zone as the forward firing positions were located in it. The second trench was 200-400 m behind the first.

The second position was usually 2-3 km from the forward edge of the first position. This included one or two trenches and was readied in the event that the enemy breached the first position in order to stop the enemy and prevent its advance deep into the defenses. Here were located the second-echelon battalions of the regiments.

The third position was established 2-3 km away from the forward edge of the second position. It also was provided with one or two trenches and was designed for the positions of the second echelons of the rifle divisions.

The first and second trenches were interconnected by communications trenches counting one per platoon located in the first trench with second and third trenches for one per company. The system of trenches and communications trenches ensured all-round defense of the battalion and company areas and the rapid and covert maneuvering of the troops along the front and in depth and impeded the enemy from discovering the location of the battle formation and fire plan on the defensive.

In addition to the trenches and communications trenches in the main defensive zone they also built other man-made obstacles such as pillboxes, tank ditches and wire obstacles.



The second defensive zone consisted of one or two positions. On important sectors this was occupied by the troops along a solid front, and on secondary ones, only on the most threatened sectors and was built in the aim of preventing the enemy from penetrating the defenses in depth when the enemy had broken through the main zone as well as to support the deployment of the corps reserves for counterattacks.

On likely tank approaches, during the second period of the war, mixed minefields were employed significantly more broadly than in the first. The terrain ahead of the defensive front of the units and formations on the important axes was mined almost solidly. Thus, in the zone of the 6th Guards Army of the Voronezh Front in the Kursk Battle as an average for each battalion defensive area in the first position there were from 1,600 to 2,500 antitank and antipersonnel mines.

A most important condition for a strong defense was a well-organized fire plan combined with obstacles and minefields.

During the prewar years, the fire plan of rifle formations was based upon the fire of all types of small arms supplemented by artillery fire.

The defensive battles of the first period of the war disclosed weak points in the organization of the fire plan. The density of small-arms fire was 3-4-fold less than that established by the prewar standards while the over-all depth of the fire plan for the rifle formations was greatly reduced.

In organizing the fire plan on the defensive, the main requirement was to ensure the combating of the massed enemy tank attacks. This was achieved by establishing intense antitank artillery fire ahead of the forward edge by echeloning it to the entire tactical depth as well as by maneuvering to the threatened axes.

The experience of the defensive battles in the summer and autumn of 1941 showed that for repelling the enemy massed tank attacks it was essential to have a higher density than was envisaged by our prewar regulations (6-9 guns per kilometer of front). In organizing the antitank defenses in the summer of 1941, there were substantial flaws: its shallow configuration and relatively even positioning of the antitank guns along the front (by lines and not in terms of sectors) and the insufficient involvement of the remaining artillery (in addition to the antitank) and the tanks for combating enemy tanks; cooperation was not organized between the artillery, the other combat arms and aviation and consideration was not always given to the importance of the man-made obstacles and artillery flanking fire.

The elimination of the shortcomings in organizing antitank defense was an important condition for increasing the stability of the defenses.

In studying and generalizing combat experience, the troops constantly improved antitank defense. They began a transition from the even positioning of the antitank artillery along the entire front to its massing on the main sectors. The density of the artillery assigned specially to combat the tanks constantly increased. Thus, at the outset of the war this averaged 0.5-1 gun per kilometer of front, at Moscow it was 1-3 guns and at Stalingrad 4-9 guns per kilometer of front. These densities were higher on the important likely tank approaches.

The increased density of antitank artillery was carried out in two ways: by its more decisive massing on the main sectors and by increasing the antitank forces in the troops. For example, the number of antitank units of the RVGK [Reserve of the Supreme High Command] in comparison with the start of the war had risen by over 4-fold by the end of 1941 and by more than 16-fold by the end of 1942. The number of antitank artillery was also increased in the rifle divisions. While in July 1941, it was planned that a division would have 50 45- and 76-mm cannons, by the end of 1942, their number has been brought up to 80. In December 1941, a division received 89 antitank rifles and in July 1942, they already numbered 228.<sup>4</sup>

In the second period of the war, antitank defenses were further improved. These began to be established to the entire tactical depth and covered all the likely tank approaches. The density of antitank weapons per kilometer of front reached 5-15 guns and 2,200-2,400 antitank mines.

The antitank defenses in the zones of the first-echelon divisions and corps were organized considering combat experience and the demands of the Draft Red Army Field Manual (PU-43) and which provided that "antitank defenses are organized to the entire depth of the defenses and primarily ahead of the forward edge of the main defensive zone. A large portion of the forces of antitank defense is to be employed for fighting for the main defensive zone."<sup>5</sup>

The importance of antitank defenses increased in the system of entire troop defense. The number of strongpoints in the zones of the divisions varied and depended upon the specific conditions and the presence of antitank forces. Thus, in the XV Rifle Corps of the 13th Army at Kursk in July 1943, antitank defenses were organized according to the principle of setting up strong antitank strongpoints echeloned in depth on the probable axes of enemy tank operations [deystviya]. As a total in the corps, they organized 24 such points, a majority of which was located in the battalion defensive areas and formed the battalion antitank centers. In the rifle regiments for convenience of artillery command, these were combined into antitank areas (PTOR).<sup>6</sup> The most typical in terms of strength was an antitank strongpoint which would include 4 or 5 guns, 6-8 antitank rifles, 2 or 3 medium machine guns, 3 or 4 light machine guns, a platoon of



submachine gunners and a combat engineer squad. In addition, whenever possible it would include 1 or 2 tanks or SAU.

The mobile obstacle construction detachments (POZ) were also widely employed on the defensive. These were designed for quickly moving up on the axes of enemy tank operations [deystviya], mining the terrain, if the situation required this, as well as the crossings of rivers and the creation of timber obstructions in forested areas. Their strength varied. A division, for example, usually assigned a combat engineer platoon which could carry 250-300 antitank mines on vehicles or carts while a corps would have a combat engineer company with a supply of up to 700 mines.

The antitank artillery reserves were assigned to reinforce the antitank defenses on likely tank approaches in the aim of combating enemy tanks which had broken through. A rifle division assigned, as a rule, an artillery battalion as the antitank reserve.

There was a number of major shortcomings in troop command at the outset of the war. In giving great attention to establishing firm and continuous command, the Soviet Command, in being guided by the war's experience and by changes in organization, carried out a number of measures in this area.

The control posts began to be positioned closer to the troop battle orders and this made it possible to increase the dependability of communications and shorten the time for delivering orders and instructions to the troops. While in the first months of the war a divisional command post was located 10-15 km from the forward edge, and those of regiments were 4-8 km away, at Moscow and Stalingrad the figures were already, respectively, 8-10 km and 2-5 km. At the same time, the observation post of the divisions and regiments was located in direct proximity to the troops. In the second period of the war, command posts of formations were usually positioned in areas inaccessible for tanks, behind the center of the battle formation and at the following distance: the divisional ones were 6-8 km from the forward defensive edge and the corps ones were 10-12 km. They were away from the expected main enemy thrust, in terrain making it possible to observe the counterattacks of the divisional or corps reserves. The corps (divisional) commander before combat controlled the troops basically from the command post. With the start of hostilities, he with a group of officers remained at one of the observation posts. Observation posts of corps and divisional commanders were located 2-3 km from the forward edge, in areas which ensured the necessary view of the defensive front. This increased flexibility of control but required their dependable defense against enemy actions and careful engineer organization. Usually strong dugouts or shelters were built ensuring the work of the staff officers during artillery shelling. In the divisions and corps, 2-3 km from the main command post they set up one and sometimes two alternate command posts.

Thus, the experience of the Great Patriotic War persuasively shows that the defensive combat tactics of the Soviet Army was constantly improved depending upon the development of the means of combat as well as changes in the tactics of enemy actions. As combat experience was gained and as the troops became saturated with combat equipment, the defensive of the Soviet troops became stronger and stronger and the methods of organizing this were improved. The experience of the defensive fighting is of great importance under present-day conditions. A thorough study and creative application of this in the practices of troop training will aid largely in increasing the tactical skill of the Soviet military.

#### Footnotes

1. "Vremennyy Polevoy ustav RKKA 1936 (PU-36)" [Provisional RKKA Field Manual of 1936 (PU-36)], Moscow, Gosudarstvennoye Voennoye Izdatelstvo Narkomata Oborony SSSR, 1937, p 9.
2. "Polevoy ustav RKKA (PU-39): Proyekt" [RKKA Field Manual (PU-39): A Draft], Moscow, Voenizdat, 1939, p 396.
3. "Razvitiye taktiki Sovetskoy Armii v gody Velikoy Otechestvennoy voyny (1941-1945 gg.)" [The Development of Soviet Army Tactics During the Years of the Great Patriotic War (1941-1945)], Moscow, Voenizdat, 1958, p 289.
4. "Boevyye deystviya Sovetskoy Armii v Velikoy Otechestvennoy voyne 1941-1945. Kratkiy voyenno-istoricheskiy ocherk" [Combat Actions of the Soviet Army in the Great Patriotic War of 1941-1945. A Concise Military History Essay], Moscow, Voenizdat, Vol 1, 1958, p 181.
5. "Polevoy ustav Krasnoy Armii 1943 g." [1943 Red Army Field Manual: A Draft], Moscow, Voenizdat, 1943, p 495.
6. "Razvitiye taktiki Sovetskoy...", p 323.

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#### Genesis, Development of Theory of Combat Employment of Air Forces (1917-1938)

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[Article by Col V.V. Anuchin, candidate of military sciences; Lt Col O.N. Zdorov, candidate of military sciences: "Genesis and Development of the Theory of Combat Employment of Air Forces (1917-1938)"]

[Text] Aviation science, as a system of knowledge concerned with the organization and training of the Armed Forces, the principles and methods of their employment,

arose in our nation during the first years of Soviet power. During the period from 1918 through 1924, the Labor and Defense Council headed by V.I. Lenin adopted a series of important decrees on the development of Soviet aviation and the organization of the appropriate research facilities. They established the "flight laboratory," the Central Aerohydrodynamic Institute, the Moscow Aviation Technical School, a scientific experimental airfield and several design bureaus. Work was started on generalizing the combat experience of World War I and the Civil War. Here an important role was played by the aviation section of the Military Scientific Society of the RKKA [Worker-Peasant Red Army] Military Academy (from 1925, imeni M.V. Frunze). Taking an active part in its activities were the faculty and representatives of the Republic Military-Revolutionary Council [RVSR], the RKKA Staff and the Main Directorate of the Worker-Peasant Red Air Force (from April 1924, the Air Forces Directorate). They published the materials of their research on the pages of the journals VESTNIK VOZDUSHNOGO FLOTA, KRASNYYE ZORI, VOYENNYE ZARUBEZHNIK as well as in the newspaper KRASNAYA ZVEZDA.

In 1924, the book "Taktika vozdushnogo flota" [Air Fleet Tactics] was published by N.A. Yatsuk, the first work setting down the principles of a new independent military discipline. Tactics was included in the training programs of all the flight schools and in the training of the pilot recruits became the main subject. A.N. Lapchinskiy made a tangible contribution to the development of the theory of aviation combat employment. In the articles, pamphlets and scientific works written by him, and particularly in "Taktika aviatsii" [Aviation Tactics] (1926), various questions involved in the organizational development and use of the Air Forces were examined. Of significant value were such books published over several years as "Strategiya i taktika Krasnogo Vozdushnogo Flota" [Strategy and Tactics of the Red Air Fleet] by A.V. Sergeyev (1925), "Voprosy strategii i taktiki Krasnogo Vozdushnogo Flota" [Questions of Strategy and Tactics of the Red Air Fleet] by V.V. Khripin (1925), "Vozdushnyye sily v voyne i operatsii" [Air Forces in War and an Operation] by S.A. Mezheninov (1927) and "Obespecheniye vozdushnykh operatsii" [Support of Air Operations] by A.S. Algazin (1928). The theoretical concepts put forward and established in these served as the basis for the elaboration of the first Soviet aviation regulations, guides and manuals, including: "Vremennyy stroyevoi ustav aviatsii SSSR" [Provisional Drill Manual of Soviet Aviation], "Voyevoy ustav vozhukhoplavitel'noy sluzhby RKKA" [Field Manual of the RKKA Air Navigation Service], "Voyevoy ustav Voenno-Vozdushnykh Sil RKKA" [Field Manual of the RKKA Air Forces] (Book 1, Fighter Aviation, 1929), "Vremennoye nastavleniye po boyevomu primeneniyu Vozdushnykh Sil SSSR" [Provisional Regulation on the Combat Employment of the USSR Air Forces], "Nastavleniye po sovmestnoy rabote aviatsii s konnitsey" [Regulation Governing the Joint Operation of

Aviation With the Cavalry], "Nastavleniye shturmovoy aviatsii" [Regulation of Ground Attack Aviation] and others. However, in the military theory works and in the official documents, the questions of the employment of aviation were set out considering its real combat capabilities. Due to the small numbers and poor technical equipping of the Air Forces, the range of missions carried out by them was limited to actions in the interests of the various combat arms and headquarters bodies (commands, staffs).

In the 1930s, the efforts of aviation science were focused on working out the principles of operational [operativniy] art, general tactics and the tactics of the individual arms of the Air Forces and reflecting their transformation initially into an independent combat arms and then into an Armed Service. The questions of an operational-strategic [operativno] and operational-tactical [operativno] nature were taken up in the research of A.N. Lapchinskiy "Tekhnika i taktika vozdushnogo flota" [Equipment and Tactics of the Air Fleet] (1939), "Vozdushnyye sily v boyu i operatsii" [Air Forces in Battle and an Operation] (1932), "Vozdushnyy boy" [Air Combat] (1934), "Bombardirovochnaya aviatsiya" [Bomber Aviation] (1937) and "Vozdushnaya armiya" [Air Army] (1939), V.V. Khripin "Vozdushnaya voyna" [Air Warfare] (1934), P.P. Ionov "Obshchaya taktika Voenno-Vozdushnykh Sil" [General Tactics of the Air Forces] (1934) and "Istrebitelnaya aviatsiya" [Fighter Aviation] (1940), A.K. Mednis "Taktika shturmovoy aviatsii" [Ground Attack Aviation Tactics] (1935), M.D. Smirnov "Voyskovaya aviatsiya" [Troop (Organic) Aviation] (1936), B.L. Teplinskiy "Osnovy obshchey taktiki VVS" [Principles of General Air Force Tactics] (1940) and other authors. The practical recommendations contained in them were reflected in the "Voyevoy ustav Voenno-Vozdushnykh Sil RKKA" [Field Manual of the RKKA Air Forces] (Book 2, Reconnaissance Aviation, 1931), "Vremennoy polevoy ustav RKKA (PU-36)" [Provisional RKKA Field Manual (PU-36)], the "Regulations on Flight Execution (NPP-34, NPP-36, NPP-38)," "Vremennaya instruktsiya po samostoyatelnym deystviyam Voenno-Vozdushnykh Sil RKKA" [Provisional Instructions on Independent Operations of the RKKA Air Forces (1936)], "Instruktsiya po vozdushnomu boyu (IVB-38)" [Instructions on Air Combat (IVB-38)], as well as the field manuals for bomber aviation (BUBA-40) and fighter aviation (BUA-40).

In the area of operational [operativniy] art, the attention of the specialists and scientists during the interwar period was focused on analyzing the forms and methods of the combat employment of the Air Forces, on working out the problems of preparing and conducting air operations [operatsii] and the fight for air supremacy. At that time the main forms (types) of operations [deystviya] were considered to be: independent (the launching of strikes against enemy industrial centers outside the context with the plan of operations [operatsii] conducted by the ground forces), autonomous (destruction of enemy targets in the interests of the ground troops and in a close

alert period preceding a war and, secondly, the corresponding early disposition of the air defense forces.... Since an air attack is carried out extremely quickly and to a great depth, it is essential that all the aviation in the border districts have a status of border security units. At the same time, it is completely essential to provide for the prompt pulling back of the aviation units and formations from the permanent airfields to field airfields.... In no instance should it be permitted to locate the main airfields closer to the line on which air combat can be given to the enemy."<sup>9</sup> He advanced the idea of establishing a solid air defense front combined with defense of individual rear facilities (zonal-installation air defense), and viewed the general system of the fighter air cover of the front forces as the most economic in comparison with installation air defense. It is worthy of note that the choice of the optimum variation for troop coverage was made by him on the basis of detailed operational-tactical [operativno] calculations and actually using "cost-effectiveness" criteria and the preventable harm (although these terms were not employed). The scientists proposed that the operations [deystviya] of antiaircraft artillery and other air defense forces be assessed not from the number of downed aircraft but rather by the number of bombings not executed by the enemy. And regardless of the fact that the direct effect here was not very great, expenditures on one repulsed bomber turned out to be 6-fold less than the cost of the bomber (while in terms of one downed aircraft it was 6-fold more).<sup>10</sup>

Aviation science was able to draw generally correct practical conclusions from an analysis of the development trends of operational [operativniy] art during the interwar period. In particular, the Great Patriotic War confirmed the correctness of recommendations to focus the main efforts on the fight for air supremacy. However, an underestimation of the possibility for the enemy to launch a surprise strike, as the military theorists had warned, became one of the reasons for the heavy losses suffered by our aviation at airfields on the first day of the war.

Simultaneously with research in the area of operational [operativniy] art, there was also the elaboration of problems in the **general tactics of the Air Forces and the tactics of the air arms**. Specialists and scientists emphasized that the development of the Air Forces made it impossible to have an artificial separation of tactical questions from operational [operativniy] ones. Their efforts were concentrated on an analysis of the objectives of the strikes, establishing the methods of actions [deystviya] of the air subunits and units, the tactical procedures of surmounting the resistance of various air defense weapons as well as working out tactical and technical requirements for combat aircraft.

By the mid-1930s, bomber aviation had become the main strike force of the Air Forces "which plays the main role in the operations [deystviya] of the air forces against the enemy's deep rear and in the new type of air warfare planned by the imperialists, a war across the seas and

across the neighboring country."<sup>11</sup> For achieving the greatest effectiveness of the bomb strikes, the scientific works recommended that the vulnerable elements in the objectives of the operations [deystviya] be disclosed and on the basis of "combat calculations" employing the apparatus of probability theory, to determine the optimum size of the groups, the necessary types of aircraft, the rational means of attack and the conditions of their employment. The authors analyzed in detail the functioning processes and determined the weak points in standard objectives: rail junctions, bridges, airfields, dumps and so forth. For example, among the elements to be knocked out without fail at rail junctions were the depot, the shops and the water towers. Using the results of calculations, they compiled the required numbers of aircraft for hitting standard objectives under various conditions.

For destroying the set objectives it was considered wise to launch simultaneous and successive strikes against them with a large number of aircraft which should travel to the target in a general battle formation consisting of the main forces and groups of varying purpose such as: reconnaissance, feint, neutralizing antiaircraft batteries and cutting through barrage balloon obstacles.<sup>12</sup> Here the bombers had to overcome the resistance of the antiaircraft aviation and fighters along the front line, in the area of the objective as well as the balloon obstacles. As methods to combat the antiaircraft artillery and the fighter aviation, they proposed that the antiaircraft weapons be neutralized, the altitude and speed of flight increased, the target was to be attacked from low-level flight or a dive, and the executing of antiaircraft avoidance (a serpentine with turn angles of 120 degrees and travel times along the rectilinear sections of up to 40-60 seconds) and fighter avoidance (turning toward the attacking enemy) maneuvers.<sup>13</sup>

The researchers pointed out that from the viewpoint of tactics it was advisable to keep the payload on the aircraft constant while the flight weight would be variable and not vice versa. Since, according to the calculations, an increase in the number of bombs on board did not lead to a substantial rise in bombing effectiveness, they proposed, for example, to develop, in the place of an aircraft with a cargo capacity of 10 tons, of using one of only 3 tons while the remaining 7 tons would go to reinforce the protection of the fuselage and the wings with armor 13-15 mm thick. Since a crew on a combat run was limited in its maneuvers, it made no sense to take off with a large number of bombs, if there was no guarantee that they could be delivered to the target. Moreover, A.N. Lapchinskiy voiced the idea of developing a "bomb aircraft" which would be capable of hitting any objectives, having anticipated the appearance of unmanned aircraft. In his work he also posed the question of the development of multipurpose aviation.

The experience of the Great Patriotic War confirmed the validity of many recommendations on the employment of bomber aviation, but at the same time showed how



operational-tactical [operativn ] cooperation with them) and auxiliary (air reconnaissance and observation of the battlefield).<sup>1</sup>

The researchers were deeply concerned with establishing a theory of the air operation [operatsiya]. Even in 1924, they proposed carrying out "special air operations [operatsii] in the aim of luring into the air and defeating in air combat the most significant enemy forces possible" by launching feint group attacks against objectives close to the enemy airfields and committing to battle concentrated fighter forces.<sup>2</sup> Somewhat later, they established the need for carrying out the same with the mission of destroying the main ground enemy facilities (for example, air operations [operatsii] to combat reserves, destroy the rail network on the scale of a front, disrupt the operation [rabota] of headquarters bodies, supply and so forth). The main factors of success were assumed to be: clarity of plan, the conformity of the means to the ends, prompt and surprise deployment of the forces.<sup>3</sup>

It must be particularly pointed out that from the very outset all the specialists considered the winning of air supremacy to be the main purpose of the air forces. The struggle for this was viewed not as an end in itself but rather as actions which would ensure the success of the ground forces and aviation. However, the content of this underwent significant evolution. While initially it was pointed out that the main result was to be the moral suppression of the enemy,<sup>4</sup> in 1940 a different definition appeared: "By the term 'air supremacy' one must understand a situation where aviation can successfully carry out all its main missions, while the enemy aviation is deprived of any opportunity to operate effectively against the land army, navy and rear services of the opposing country."<sup>5</sup> The struggle for air supremacy, in the opinion of the researchers, was the most important of all the tasks confronting the Air Forces, it was to be carried out continuously and to be particularly strengthened during the period of decisive operations [operatsii]. Air supremacy could not be achieved by the mere massed strike or a general air engagement.

The 1930s were also years of debate on the level of selecting the objectives of air forces operations [deystviya]. What should be bombed? Objectives on the battlefield (reserves, airfields, dumps) or the state rear (cities, plants and factories), as followed from the widespread theory abroad of the Italian Fascist Gen G. Douhet who considered aviation the chief means of moral deterrence of the enemy? In debating G. Douhet, Soviet aviation theorists proved that the first to be hit would be military installations and primarily those the destruction of which would make it possible to quickly win air supremacy. These included aircraft in their own and foreign airspace, field air bases, supply depots, various types of dumps, flight training centers as well as aviation and motor building plants.<sup>6</sup>

At the same time the authors of the works emphasized that one could scarcely speak merely of operations

[deystviya] by the various armed services without coordination and concentration of their efforts on carrying out the main mission. In this context the Air Forces had to fight simultaneously for air supremacy as well as operate in the interests of the troops of the fronts. From this stemmed the need to have an air fleet which would include independent forces as well as forces serving the Army and Navy. The main purpose of the former was: destruction of enemy aviation; operations [deystviya] against rear facilities; airborne landings; support of the troops in land and sea operations [operatsii].<sup>7</sup>

Noteworthy from the viewpoint of defensive military doctrine was the interpretation of the balance of offensive and defensive actions of aviation in those years: "As for the air forces, for them the defense of their country consists in air combat over their country against enemy aircraft penetrating into it, in air battles over the fields of land battles and engagements, in air battles against the offensive enemy aviation in its positions and in destroying training centers, airfields, air bases and air production centers of the enemy. All these tasks are to be carried out offensively but are, in essence, the defense of one's positions.... If aviation sets as its main goal the neutralization of the enemy air forces, then it and not the infantry carries out a defensive task...."<sup>8</sup> If the ground forces are on the defensive, then the enemy offensive forces must be destroyed, and if on the offensive, the defensive and offensive forces. Thus, on the ground the troops can defend themselves and in the air advance.

The rapid development of aviation in the 1930s had a substantial impact upon operational [operativniy] art and tactics of the ground forces. The introduction of new types of aircraft and the dropping of the first airborne forces changed the views on the methods of their combat actions. The concept of an operation [operatsiya] in depth appeared and this envisaged the simultaneous neutralization of the enemy defenses to the entire depth. This was based upon the massed employment of aviation, armored equipment and artillery and was reflected in the Provisional RKKA Field Manual (PU-36). In working out the questions of the employment of the Air Forces, specialists concluded that the winning of air supremacy, the sealing off of the battlefield and the interdiction of the approach of reserves by attacking to a great depth in operational-tactical [operativno] cooperation with the ground troops would lead to the exhaustion of enemy combat forces, it would impede the building up and concentrating of forces and be an important condition for the success of the operation [operatsiya].

The researchers devoted significant attention to the problem of maintaining the air groupings in the initial period of a war. For example, A.N. Lapchinskiy pointed out: "Since states now will not declare a war but will rather 'slip' into it, surprise strikes against permanent airfields are completely possible. This requires, in the first place, constant vigilance, particularly in a really felt



poorly the scientists had worked out a number of important questions, in particular, the procedure for launching the strikes under conditions of strong resistance from the enemy air defenses. The tactical procedures which made it possible to successfully combat them such as group bombing from a dive (the "Polbin revolving door") and the "aircraft circle" battle formation appeared only in the course of engagements against the Nazi invaders.

In investigating the problems of fighter aviation tactics, it was established that the main methods which could be employed were: operations [deystviya] from an ambush; air patrolling; operations [deystviya] from airfields. Ambushes were to be organized of two types: forward from fields close to the front line with scrambling after visual detection of the air enemy traveling toward our positions and with a pursuit attack; rear for intercepting returning enemy aircraft with fighting over our own territory.

The procedure for carrying out the attack was worked out on the basis of detailed calculations considering all the flight specifications of the aircraft. The conclusion was drawn on the need to concentrate the fire and conduct group fighter actions for achieving an advantage over the enemy. Among the important factors were also: surprise, concealment and speed of the attack; firing from minimum ranges; the primary destruction of the leading crews in the enemy groups. The main trait of an air fighter was recognized to be activeness: "We term a fighter not the pilot flying a fighter aircraft but rather a pilot destroying the enemy aircraft in air combat."<sup>14</sup>

The published works established the fighter battle formations and these ensured dependable visual contact between the pilots, freedom of maneuver and reciprocal fire support. For a flight, the "V" and "echelon" were judged to be rational from this viewpoint with the vertical separation of the aircraft (the wingmen were to the side and above the leader). During attacks by enemy bombers it was considered essential in the combat formations of the fighter aviation to have two groups, one of which was to carry out the task of diverting the cover fighters to themselves (holding action). The possible actions of the pilots under night conditions were also examined.<sup>15</sup>

The researchers gave great attention to establishing the demands on the fighter aircraft. Considered as obligatory was the availability of great forward and vertical speed of flight, a significant available load factor and powerful cannon and machine gun weapons. Along with this the idea was voiced of developing a multi-seat heavy air fighter ("cruiser") for escorting the long-range bombers and defending important facilities deep in the rear.<sup>16</sup>

In investigating the questions of assault aviation tactics, the military theorists pointed out that an important distinguishing trait of the attack planes is the ability to destroy objectives which are little vulnerable to other aircraft, including: troops and combat equipment (tanks,

artillery and motor vehicles). The attack aviation was to be employed as supplementary to ground weapons in the aim of attacking enemy positions, enemy reserves in concentration areas and in the course of moving up. The actions of the attack aviation directly over the battlefield were recognized as ill-advised and would be permitted only as an exception, as they in this instance replaced the weapons of the troops.

The main principle of employing the attack aviation consisted in its massing on the designated sectors in the interests of preventing a scattering of forces: "...it is better to launch a decisive attack against a smaller number of main objectives than a weak attack against numerous but secondary targets."<sup>17</sup> In this context the aviation specialists and scientists worked out methods for attacking standard targets (accumulations of infantry and cavalry, vehicle columns, airfield facilities, armored equipment, armored trains, railroad structures, bridges, communications centers, command posts and so forth), the procedures for repelling enemy fighter strikes and conducting ground attack operations [deystviya] under various meteorological conditions.

Chief attention was given to the executing of low-level flight at an altitude of 5-10 m by the attack planes. This was explained by the merits of this method: high firing and bombing accuracy; surprise at reaching the objective and attacking; the difficulty of fighter attacks and the firing of enemy antiaircraft weapons. However, the method was not devoid of shortcomings and these included: the difficulty of visual orientation during the flight; the limited view of the terrain by the pilot; the possibility that the aircraft would be hit by shells, mortar shells, bullets and shrapnel due to the intersecting of trajectories; the great psychophysical stress on the crew; the impossibility of using rescue parachutes; the difficulty of choosing a landing area with motor failure. Even a deviation of 200-300 m from the set route could exclude the detecting of the target and lead to the nonfulfillment of the set mission. Nevertheless, diving attacks were considered ineffective.

For operations [operatsiyi] against areal objectives, the battle formations of the assault aviation were to be made up from groups of differing tactical purpose, for example, for attacking a field airfield they assigned two ground attack flights each to attack the aircraft parking areas, the fuel and ammunition dumps, the quarters of the flight and technical personnel and the positions of the air defense weapons and one for boosting the effort, that is, a total of nine.<sup>18</sup> It was noticed that the effective employment of attack aviation in each specific instance could be achieved only on a basis of careful planning of combat and based upon the results of detailed calculations made considering the particular features of the situation, the actual characteristics of the targets and the available weapons.

The authors of the works placed the following demands on the special aircraft of this type: speed of flight

300-350 km an hour; payload of 300-500 kg; operating radius of 300-400 km; the capacity to carry out two or three sorties without refueling; high maneuverability and rate of climb; armor on the belly and sides of the fuselage for protection against small-arms fire carried out from acute angles. A high ceiling was considered not essential while a powerful machine gun was considered more important than dependable armor. No provision was made for the complete arming of the attack plane and the mounting of cannons on it.

The elaboration of questions related to the tactics of troop [voyskovaya] aviation also had its specific features. The problem was that tactical aviation, in being considered a part of reconnaissance, was included in the rifle corps. It was directly subordinate to their chiefs of staff (the fire correction detachments to the artillery chiefs) and in special terms (flight, military-technical, weapons and air navigation training and manning) to the chief of the army air forces. The main purpose of this aviation was to serve the rifle and other formations and units in a combat situation.

The air subunits were entrusted with air reconnaissance, observance of the battlefield, supporting communications, guiding tanks to targets, checking the camouflage of their troops, scattering agitation literature and in individual instances, operating against air and ground objectives.<sup>19</sup> Reconnaissance was considered the most important mission and this was to be carried out visually (including under night conditions) as well as by photographing the designated areas using surprise principles (since one could not count on a fighter cover) and force (a group flight).<sup>20</sup> The transmission of the order to carry out the mission to crews in the air as well as the receiving of intelligence data were to be carried out by radio, by ground signal tarps, light signal equipment, signal rockets, inflight "grabs" for snaring parcels from the ground and pennants. It was recommended that the time for delivering the obtained photographic information be reduced by dropping the removed films or the films which had already been developed on board.<sup>21</sup>

The specialists felt that the command of a rifle corps should have at least 16-20 aircraft for photographing enemy positions, for conducting tactical reconnaissance, for correcting artillery fire, for guiding tanks, for observing reserves, for surveilling our own troops and supporting communications. In the aim of continuously tracking the enemy, they prescribed a thorough consideration of the particular features as well as determining the required lines and intervals of reconnaissance during various types of combat by the corps formations and units.

Thus, the results of the research conducted in the inter-war period on the questions of operational [operativniy] art and tactics of the Air Forces became the basis of views on the employment of Soviet aviation and these were practically tested out in the course of the hostilities

in Spain and China, at Lake Khasan, on the Khalkhin-Gol River, in the Soviet-Finnish War and subsequently in the Great Patriotic War. Many recommendations and conclusions of aviation theory were brilliantly confirmed and were one of the sources of our victories, but certain ones required a fundamental revision or great efforts for their clarification and rectification.

Historical experience has shown that operational [operativniy] art and tactics of the Air Forces should develop at a more rapid pace. A situation where their improvement begins in the very process of the mass delivery of new types of aircraft is unacceptable, as this inevitably leads to undesirable consequences. An analysis of the first works on the theory of the combat employment of the Air Forces shows that for the success of the matter, the main thing is how boldly and promptly the urgent problems and the ways to resolve them are defined and the obtained data are incorporated in troop combat training. Any valuable proposal remains just this if it is not considered by the developers of the aviation equipment and also is not practically assimilated by the staff officers and all the flight personnel.

#### Footnotes

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4. See: "Vremennoye nastavleniye po boyevomu...", p 3.
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8. A.N. Lapchinskiy, "Vozdushnaya armiya" [Air Army], Moscow, Gosvoenizdat, 1939, p 69.
9. Ibid., p 146.
10. See: A.N. Lapchinskiy, "Bombardirovochnaya aviatsiya," pp 38, 39, 113.
11. A.N. Lapchinskiy, "Vozdushnyy boy" [Air Combat], Moscow, Gosvoenizdat, 1934, p 4.

12. See: A.N. Lapchinskiy, "Bombardirovochnaya aviatsiya," p 373.
13. A.N. Lapchinskiy, "Vozdushnyy boy," pp 100-157, 172, 183.
14. Ibid., p 31.
15. See: P.P. Ionov, "Istrebitelnaya aviatsiya" [Fighter Aviation], Moscow, Gosvoenizdat, 1940, pp 36-38.
16. See: A.N. Lapchinskiy, "Vozdushnyy boy," pp 274-276.
17. A.K. Mednis, "Taktika shturmovoy aviatsii" [Attack Aviation Tactics], Moscow Gosvoenizdat, 1935, p 53.
18. Ibid., p 44.
19. See: M.D. Smirnov, "Voyskovaya aviatsiya" [Tactical Aviation], Moscow, Gosvoenizdat, 1936, pp 9-10.
20. Ibid., p 42.
21. See: A.N. Lapchinskiy, "Tekhnika i taktika vozdushnogo flota" [Equipment and Tactics of the Air Fleet], Moscow-Leningrad, Gosizdat, 1930, pp 67-74.

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**Air Operations to Thwart Operation Brazil**  
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25 Jul 88) pp 27-31

[Article by Col (Ret) S.K. Yermilov, candidate of naval sciences: "Air Operations [deystviya] to Thwart Operation [operatsiya] Brazil"]

[Text] At the end of August and the beginning of September 1941, regardless of the stubborn resistance by our troops, the enemy had succeeded in taking Lyuban, Tosno, Mga Station, Shlisselburg, and reaching the Neva in the area of the Ivanovskiye Rapids and Lake Ladoga. The blockade of Leningrad had commenced.<sup>1</sup> In the aim of delivering food, fuel and other supplies to the city and evacuating industrial enterprises and the population into the interior of the nation, a communications line was organized on Lake Ladoga and called the Lifeline. Its continuous operation required the organizing of a reliable defense, including an air cover. Thus, in supporting shipments across Ladoga, the naval aviators alone in 1941-1942 made over 8,000 aircraft sorties. To their score in this area were more than 200 air battles.<sup>2</sup> Guidance posts for our fighters were set up at the main points where enemy aviation might operate most actively. The airspace over the lake routes was divided into zones and this facilitated the control of the aircraft groups providing a cover for the convoys and individual ships.

For carrying out antilanding and air defense tasks for the lines of communications, in the autumn of 1941, the Ladoga Air Forces Grouping of the Baltic Fleet was constituted. The composition of the air units comprising it was frequently changed depending upon the situation. In the summer and autumn of 1942, it, for example, included: the 11th Fighter Air Regiment (iap) with 14 I-15b aircraft and eight I-16, with the airfields of Novaya Ladoga and Vystav; the 12th Separate Fighter Squadron (ioae) with nine MiG-3 and the airfield Vystav; the 58th Squadron (ae) with ten MBR-2 used as a night bomber squadron with the seaplane base of Novaya Ladoga.<sup>3</sup>

Directly for the antilanding defense of the areas on the southern coast of Ladoga, provision was also made to use other forces comprising the Leningrad Naval Aviation Grouping and specifically: the 57th Ground Attack Air Regiment (shap) with nine Il-2 and the airfield of Grazhdanka; the 3d and 4th Guards Fighter Air Regiments (giap) with a strength depending upon the situation and the 26th Separate Reconnaissance Squadron (orae) with six Yak-2 and Pe-2 and an airfield at Priyutino.<sup>4</sup> Each of these units carried out particular tasks which were set by the Naval Air Forces Staff for a month and according to the situation were adjusted daily. Thus, the 26th orae provided daylight air reconnaissance for the area of the lake. From 26 August through 23 October 1942, it made 120 aircraft sorties for this purpose. At the same time, the 58th ae, in conducting reconnaissance and making bomb strikes against the bases of the enemy ships at night made 52 aircraft sorties.<sup>5</sup>

In endeavoring to thwart movements across the lake, enemy aviation in turn increased its activeness. Ship forces were also widely employed. By the end of July 1942, up to 30 landing barges and launches had been concentrated on Ladoga along with four small minelayers, five torpedo boats and other ships and vessels.<sup>6</sup> They were all organized into a joint German-Finnish-Italian flotilla with the following tasks: destruction of Soviet ships and vessels traveling along the major route (Novaya Ladoga—Morye—Osinovets); setting minefields in this same area; destroying transports moving over the lesser route (Kobona—Osinovets) and at the bases.

The Command of the Ladoga Naval Flotilla (LVF), in considering the developing situation, realized that the enemy had sufficient forces for landing a force at one of the important points of the line of communications in the aim of disrupting or cutting it. The flotilla staff together with the fleet staff worked out additional measures to strengthen the antilanding defenses, in particular, for conducting more intense air reconnaissance and antimining surveillance. In addition, the aviation significantly increased the number of bombing and ground attack strikes against the bases and piers at Sortanlakhti, Keksgolm, Lakhdenpohye, Sortavala, Salmi as well as the skerries on the northern coast of the lake.

Soon thereafter the danger of active enemy operations [deystviya] was confirmed. During the night of 9 October, 16 landing vessels and 7 patrol boats of the so-called



ferry flotilla under the cover of 3 aircraft left Sortanlakhta in the aim of attacking the oncoming convoys, reconnoitering the system of patrols on the approaches to Volkhov Bay and most importantly, testing the strength and readiness of our antilanding defenses. As was later learned, this was the first stage of the planned Operation Brazil to disrupt the lines of communications by landing a tactical amphibious force. The patrol boats, having detected the enemy, engaged it in battle and the aircraft summoned by them made a bomb strike. Several vessels from the ferry flotilla were damaged.<sup>7</sup>

Operation Brazil itself was carried out during the night of 22 October 1942. In benefiting from the fact that because of bad weather our aviation had not conducted reconnaissance for 3 days, the enemy covertly made up a landing detachment, embarked over 100 men and set off to Sukho Island. The detachment numbered over 20 vessels, including 7 heavy, 4 light, 3 transport, 1 headquarters and 1 medical barge as well as several launches which comprised a significant portion of the ferry flotilla.<sup>8</sup>

The landing point of the force had not been chosen accidentally. The small man-made island created at the beginning of the 18th Century on shoals in the southern part of the lake had a very good position. Since the major water route ran around Sukho which covered the entrance to Volkhov Bay, the capturing of the island would make it possible to have a most active and direct effect on our movements. Moreover, the patrol boats in this instance would be deprived of an artillery support (on the island was a shore battery of 100-mm naval guns), while the convoys and aviation would lose a dependable marker in the form of a beacon. The latter was also used as the indicator for the landing vessels. At 0715 hours on 22 October, in approaching the island, they opened artillery fire against it. In truth, they did not catch the garrison (commander, Sr Lt I.K. Gusev) by surprise, since the post of the observation and signals service (SNiS) located on Sukho, had been able to spot them somewhat before. The gun crews of the shore battery, having promptly been brought to combat readiness, entered the artillery duel. They were supported by our ships Tsch-100 and MO-171 which were not far off on patrol. At 0810 hours, the enemy launches and inflated boats, under the cover of their ships and aircraft, approached the shore and began landing the amphibious force.<sup>9</sup> Since the radio which was on the island was put out of action during the very first minutes of combat, the report to the flotilla staff on the enemy assault was transmitted by the patrol boats.

Arriving shortly thereafter at the shore command post located at Novaya Ladoga were the commanders of the Baltic Fleet, Vice Adm V.F. Tributs, the Baltic Fleet Air Forces, Maj Gen M.I. Samokhin, and the LVF Capt 1st Rank V.S. Cherokov. Constant contact was established with the ship forces deployed on the lake as well as with the staffs of the fronts (Leningrad, Volkhov and Karelian). The command of these fronts, having responded

quickly to the arising situation, assigned air groups for attacking the enemy sea targets and also began to deploy formations and units along the coast following the plans for antilanding defense.

Control over the joint actions [deystviya] of the naval and front aviation was headed by Gen M.I. Samokhin. He established contact with the commanders of the air formations, he coordinated the procedure and organization of these operations [deystviya] with them and took the decision: using the forces of the Ladoga and Leningrad air groups to launch a series of successive concentrated strikes against the enemy landing forces in the area of Sukhov Island. Surveillance of the landing force in the aim of determining its strength, position and the maneuvering of the ships and the state of the weather was assigned to the crews of the 26th orac. At 0815 hours, the task was given to the commanders of the 8th Air Brigade (Leningrad Air Group), Hero of the Soviet Union, Col Ye.N. Preobrazhenskiy, and the 61st Air Brigade (Ladoga Air Group), Hero of the Soviet Union, Col P.V. Kondratyev, to destroy the landing force.<sup>10</sup>

Over a period of 5 minutes (from 0825 hours to 0830 hours), the appropriate instructions were received by the commanders of the air units: the 57th shap, the 3d giap, the 21st iap and 11th iap and the 12th ioae. For example, the 11th iap (commander, Maj I.M. Rasudkov) was, in employing all the operating aircraft, to make repeated sorties to the landing area and launch bombing and strafing attacks against it, while the 12th ioae (commander, Capt V.G. Kraynov) was to cover the assault groups of the 11th iap.<sup>11</sup>

The joint operations [deystviya] of the naval and frontal aviation began 57 minutes after the landing of the force on Sukho Island. The dependability of cooperation and also the accuracy of the strikes were ensured by the leading of the frontal aviation groups to the enemy ships using leader crews from the fleet Air Forces. A total of 12 strikes were made. The first of these was carried out at 0907 hours by four I-15b from the 11th iap (leader, Capt S.S. Belyayev) from the Novaya Ladoga Airfield without a fighter cover and the second was 13 minutes later also by four I-15b of the 11th iap (leader, Capt A.A. Mironenko), but now under the cover of six MiG-3 of the 12th ioae (leader, Capt G.V. Kraynov). The appearance of our forces inspired the defenders of Sukho who with their last efforts were checking the advance of the enemy soldiers and also spread confusion in the enemy ranks. In suffering losses and in confusion, the Nazis began to retreat to the shoreline and hurriedly embark in the launches and inflated boats. At 0930 hours, the vessels with the remnants of the landing force on board pulled away from the island. Forming into a wing column, under the fighter cover they headed back to Sortanlakhti.<sup>12</sup>

Now the strikes were launched against the enemy being pursued in the aim of destroying it. Under these conditions a great responsibility rested on both the flight and



technical personnel of the air units. For example, in the 11th iap, for reducing the time required to ready the aircraft for repeated flights, bombs and other ammunition were moved up to the parking area by the time the aircraft landed and the gasoline trucks moved in. The air operations [vozdeystviya] against the landing force coincided with the coming of our ships into combat contact with the enemy vessels. This clearly increased the responsibility on those providing cooperation between the diverse forces. For this reason the Fleet Air Forces Staff was particularly careful in clarifying information on the sea targets (strength, location and actions) and provided this to the flight crews along with information on the weather along the route of flight.

Remarkable was the 11th attack involving frontal and naval aviation (12 ground attack planes organized in two groups of 6 Il-2; 20 fighters including 1 I-16, 4 LaGG-3, 6 MiG-3 and 8 Kittyhawks). The accuracy of reaching the target was ensured by following a leader and this was assigned to the commander of the 57th shap, Lt Col F.A. Morozov. Approximately 1 hour and 20 minutes before carrying out the battle mission, under the cover of 2 Yak-1 from the 21st iap, he flew on an Il-2 from Grazhdanka Airfield to Kasimovo, where he participated in a general meeting of the crews of the front ground attack planes and fighters. Under his leadership there was a brief play-through of arriving over the target. The pilots were also acquainted with the characteristics and distinguishing features (using photographs) of the enemy landing vessels and our ships which at that time were in the combat area. The crews conducting air reconnaissance reported periodically on the change in the situation. Incidentally, aviation made five aircraft sorties during the day for conducting reconnaissance tasks. The information gained largely helped to make precision strikes against the enemy vessels. At 1440 hours, the cover fighters took off and 5 minutes later two groups of 6 Il-2 and the leader covered by 2 Yak-1. Having formed into a general battle formation, they headed west. In front was the leader (Il-2) who flawlessly brought the group to the target. The landing force which had been able to move a significant distance away from the southern coast of the lake was attacked by the ground attack planes from an altitude of 500-75 m. As a result, 3 barges were sunk. Another one was damaged by the leader with two direct hits with rockets.<sup>13</sup>

Sorties were also made later for launching subsequent attacks: the 13th (7 I-15b from the 11th iap in two groups under the cover of 6 MiG-3 of the 12th ioae) and the 14th (2 Il-2 from the 57th shap under the cover of 6 I-16 of the 11th iap). But these were without result since with the onset of darkness and the deterioration in visibility contact was lost with the enemy. However, the search for the enemy ships did not stop. This was carried out regardless of the gathering darkness by individual MBR-2 of the 58th ae, having made seven aircraft sorties. Since it was not possible to discover the vessels on the lake, bombs were dropped against alternate targets.<sup>14</sup>

The fighting in the area of Sukho Island led to the defeat of the landing force and to tangible enemy losses in ships. The enemy lost 19 (according to other data 17) landing barges and launches, that is, one-half of the surface forces on Ladoga. A significant share in this good result was due to aviation which over the day made 200 aircraft sorties. Thus, there were 7 sunk ships just to the score of the pilots of the 57th shap. Here the air attacks against the landing force were carried out under conditions of constant counteraction of enemy aviation. The enemy lost 14 aircraft: 8 Me-109, 2 Fiats, 2 Capronis and 1 Ju-88 and 1 Do-215. Our losses were: 2 Il-2, 2 I-15b, 1 Il-2 (it caught on fire in a forced landing; the pilot survived).<sup>15</sup>

The importance given by our command to the defense of the lifeline can be seen from the fact that during the landing of the enemy landing force on Sukho Island as well as in all stages of the fighting that day, contact was established between the shore command post of the LVF at Novaya Ladoga and Moscow. The General Staff was constantly interested in the situation in this area. Moreover, upon instructions from Moscow, a bomber formation from the Supreme High Command Reserve was ready to assist the front and naval aviation.<sup>16</sup>

The thwarting of Operation Brazil showed the important role aviation played in the air and antilanding defenses of the lake lines of communications. Our aircraft had merely to stop surveilling the lake, the ports, bases and piers temporarily because of bad weather and the enemy gained an opportunity to covertly organize a ship detachment, embark the force and cross to the designated area. Our patrol boats were able to spot the enemy vessels with the force only in the immediate proximity of the island. The forced isolating of aviation during important stages of active antilanding defense (conducting reconnaissance, launching strikes against the embarkation points of the force, operating against it during the move and assisting the defending garrison with the landing of the enemy on the beachhead) led to a temporary success for the enemy in carrying out Operation Brazil. The landing force, regardless of the fire from our ship and coastal artillery and the steadfastness of the garrison personnel, was able not only to seize the shoreline but also advance into the interior of the island, cause tangible harm to its defenders and prepare to blow up one of the guns. But the appearance of our aviation turned the course of battle around. And the aviation played also a crucial role in the next stage of the antilanding defense of the lines of communications by pursuing and defeating the landing force.

Of special significance were the cooperation between the naval and front aviation as well as the unified command of their actions as carried out by the commander of the Baltic Fleet Air Forces through the command posts of the air formation and unit commanders.

The accuracy of the attacks made against the landing force was largely determined by the preliminary joint

elaboration of the mission, by having the aircraft (particularly the front aviation) brought to the target by a leader who was a naval pilot, as well as the conduct of air reconnaissance during the fighting.

The aircraft crews, in being in the air under conditions of bad weather and resistance from enemy fighters, demonstrated a high level of navigational, flight and tactical training, courage and intrepidity.

The fighting at Sukho Island was the final defeat of Operation Brazil. The German-Finnish-Italian ferry flotilla after this could not set to sea and its presence on the lake ceased to be noticed at all.

#### Footnotes

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2. TsVMA [Central Naval Archives], folio 46, file 25806, sheet 251.

3. Ibid., folio 12, inv. 1, file 100, sheet 2; folio 596, inv. 1, file 1, sheets 31-33.

4. Ibid.

5. Ibid.

6. Ibid., folio 2, inv. 028571, file 2, sheets 44, 100.

7. Ibid., folio 13, inv. 11898, sheets 32-40; file 2022, sheets 38-40; A.I. Mankevich, "Boi u ostrova Sukho" [The Fighting at Sukho Island], Moscow, Voenizdat, 1958, pp 22, 23; "Voyevoy put Sovetskogo Voenno-Morskogo Flota" [The Campaign Record of the Soviet Navy], Moscow, Voenizdat, 4th Revised and Supplemented Edition, 1988, p 274.

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11. Ibid., sheets 2-5.

12. Ibid., sheets 3-20; folio 13, file 7192, sheet 12.

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16. N.G. Kuznetsov, "Na flotakh boyevaya trevoga" [Quarters in the Fleets], Moscow, Voenizdat, 1971, p 287.

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#### Combat of Soviet Troops on Southwestern Sector in Initial Period of War

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[Article, published under the heading "Debates and Discussions," by Col A.A. Gurov, candidate of historical sciences: "Combat of Soviet Troops on the Southwestern Sector in the Initial Period of the War"]

[Text] There is an ever-widening discussion of the events related to the initial period of the Great Patriotic War. The pages of the journal have taken up the most pertinent questions involved in the preparation of the Armed Forces to repel the aggression as well as the course of hostilities on the northwestern sector. The proposed article examines the preparations and conduct of operations [operatsiya] by the troops of the Kiev Special Military District [KOVO] (from 22 June 1941, the Southwestern Front) during the period from 22 June through 9 July.

On the eve of the war the district (commander, Col Gen M.P. Kirponos) included: the 5th, 6th, 26th and 12th Armies, the IV, VIII, IX, XV, XVI, XIX, XXII and XXIV Mechanized Corps. As a total it included 58 divisions, including 16 tank, 8 motorized and 2 cavalry.

The rifle divisions were manned according to the peacetime TOE and in terms of combat and effective strength were significantly inferior to the Nazi infantry divisions (Table 1). A majority of the tank and motorized formations were in the stage of constituting.

In accord with the cover plan, within the district along the state frontier stretching 860 km (from the Pripjat to the headwaters of the Prut), there were up to 60 km of defensive front for each first echelon division. In the cover zones of the armies, there were seven fortified areas (URs). The main forces of the district cover troops (6th and 26th Armies, IV and VIII Mechanized Corps) were positioned on the Lvov Salient (see the diagram). The rifle divisions by the start of the war were engaged in combat training at their permanent dispositions and in the summer camps. Defensive works were being carried out directly on the frontier by two battalions from each first echelon formation.<sup>1</sup>

The forward edge of the cover armies almost precisely coincided with the configuration of the state frontier. Thus, the length of the defensive line was very great and

Table 1. Numerical Strength, Weapons of Rifle (Guards Rifle) Divisions in Armies of District Cover and Enemy Infantry Divisions on 22 June 1941\*

Army divs.	Personnel	Rifles	Submachineguns	Machine pistols	Light machine guns	Medium machine guns	45-mm cannons (c)	76-mm cannons (c)	122-mm howitzer 105-150 mm (c)	152-mm howitzer	Mortars	Motor vehicles	Tractors	Horses
81 45 ca	8373	8908	-	-	360	156	64	33	34	12	141	127	50	1766
82 ca	8546	8877	-	-	442	182	54	38	20	12	150	63	88	1892
87 ca	9973	7209	-	-	448	170	54	41	32	12	149	328	58	1897
126 ca	9471	7786	-	-	391	147	54	38	28	9	129	229	8	1771
135 ca	9232	6682	-	-	542	161	61	36	8	-	141	194	-	2078
6A 41 ca	9912	8867	4128	420	464	292	54	35	27	12	138	222	17	2482
97 ca	10050	7754	3540	401	437	174	58	37	37	12	181	143	78	2535
159 ca	9548	8278	3259	305	391	173	54	35	25	9	147	395	40	-
26A 72 ca	9904	7462	2579	345	351	110	54	38	24	-	150	433	44	2112
99 ca	9912	11056	3611	660	449	179	54	40	29	-	141	345	28	2011
173 ca	7177	7848	3727	300	427	213	54	35	24	-	136	251	50	3338
12A 44 ca	9159	8306	3741	359	435	166	-	32	24	-	154	189	30	2821
192 ca	8865	8043	1780	300	349	147	8	32	24	-	112	134	1	3021
60 ca	8313	7742	3449	939	357	209	8	32	24	-	120	10	1	2280
96 ca	8177	7442	1778	294	327	111	8	32	24	-	129	138	17	3184
58 ca	10278	8292	3628	322	478	236	8	32	24	-	144	366	39	3164
164 ca	9930	10444	3621	400	439	195	58	38	28	12	151	283	29	1921
na (#)	16859	10691	3876	767	495	118	5	20	64	-	54	902	62	6358

\* TsAMO SSSR (Central Archives of USSR Ministry of Defense), folio 131, inv. 12951, file 26, sheets 31, 32, 45.

Key: ca -- Rifle Division

ca -- Guards Rifle Division

ca -- Infantry Division (G) German





Course of Fighting on Southwestern Front (22 June—9 July 1941)

- Key:
- a—Position of troops by end of 21 Jun 41
  - b—Line reached by Nazi troops on first day of war (by end of 22 Jun)
  - c—Axis of enemy attacks during period from 22 Jun through 25 Jun
  - d—Counterstrikes by Nazi troops during period from 22 through 29 Jun
  - e—Position of troops by end of 25 Jun
  - f—Axis of enemy strikes during period from 26 through 29 Jun
  - g—Position of troops by end of 29 Jun
  - h—Axis of enemy strikes during period from 30 Jun through 9 Jul
  - i—Counterstrikes by Nazi troops after 9 Jul
  - j—Retreat and regrouping of Soviet troops during period from 26 Jun through 9 Jul
  - k—Position of troops by end of 9 Jul
  - l—Line of old fortified area
  - m—Defensive line being prepared under Directive No. 0025 of 25 Jun 41

this involved the danger of the envelopment of the Soviet troops at the salient points of the frontier (primarily the grouping located to the west of Lvov).

On 16 June, the people's commissar of defense issued orders to move the district's reserve formations closer to the frontier. For this reason from 18 June, the XXXI, XXXVI, XXXVII, XLIX and LV Rifle Corps were on the march. At the same time, from 16 June, troops of the

16th and 19th Armies began arriving from the interior military districts to reinforce the southwestern sector.

The General Staff worked out in detail a plan for defending the state frontier. On the basis of this the district had worked out a plan for its cover. This defined not only the cover zones of the army, but also the sections for the corps and the subsections for the divisions. This, we feel, significantly fettered the initiative of the command on

the spot which had a better understanding of the situation and the terrain conditions. Among the shortcomings of the designated document was also the fact that it made no provision for a deep configuration of the defenses and variations of possible combat with an enemy surprise attack. Consequently, the plan did not take into account the methods of fighting employed by the Wehrmacht Command in 1939 in Poland and in 1940 in France (a surprise attack, the massing of forces on selected axes and the launching of strikes to a great depth).

In addition, it must be pointed out that the planning of the cover continued almost until the very start of the war. Thus, the last General Staff plan was worked out at the end of May 1941. As a result, the troops were unable fully to carry it out.

The army cover plans were drawn up according to a single scheme. The defensive zone of the army was divided into sections designed for the corps and subsections for the divisions and these were organized in engineer terms. Upon a mobilization signal, these were to be occupied by the first echelon rifle formations. The mechanized corps were ordered to move into the designated areas and be ready to launch counterstrikes.

A characteristic feature of the army cover plans, with the exception of the 6th Army, was the fact that they did not contain sufficiently accurate estimates of the possible variations of enemy actions, primarily on the main axes.

The plan for the cover of the state frontier by the 6th Army (commander, Lt Gen I.N. Muzychenko) envisaged actions by the main forces of the two enemy armies on the axes of Belz, Zolochov and Peremyshl, Lvov. There was no plan for their possible strike against the boundary with the 5th Army (commander, Maj Gen Tank Trps M.I. Potapov).<sup>2</sup>

The main forces of Army Group South were deployed in front of the district troops. In the zone from the Polesye to the Carpathians were concentrated the 6th and 17th Army and the 1st Panzer Group. These numbered 36.5 planned divisions (24.5 infantry, 9 mechanized and motorized, 1 security and 4 infantry brigades).

The balance of forces of the sides as of 22 June 1941 is shown in Table 2. From it one can see that the Soviet troops as a whole were superior to the enemy in terms of tanks, artillery and aviation. However, the operational [operativnoye] position of the enemy was much better in relation to

our defensive groupings. On the axis of the main thrust the Nazis had concentrated all the tanks and aviation and up to 82 percent of the infantry divisions. The remaining forces (4 Hungarian brigades) were deployed opposite the 12th Army (commander, Maj Gen P.G. Ponedelin).

Table 2\*: Ratio of Forces in Area of Kiev Special Military District

Name of Forces	Soviet Troops	Enemy	Ratio
Divisions	38	36.5	1.6:1
Personnel (thousand men)	863.7	730	1.2:1
Guns and Mortars	13,634	9,700	1.4:1
Tanks:			
—Medium (T-34) and heavy (KV)	761	210	3.5:1
—Light (T-26, BT-7)	3,440	540	5:1
Aircraft	2,256	800	2.5:1

\* TsAMO, folio 38, inv. 11360, file 2, sheet 3; file 5, sheet 35.

The leadership of Nazi Germany had given Army Group South the following tasks: "In using a rapid thrust by powerful panzer formations from the Lublin area, to cut off the Soviet troops in Galicia and the Western Ukraine from their lines of communications to the Dnieper, to seize the crossings over the Dnieper River in the Kiev area and to the south of it and thereby provide freedom of maneuver for carrying out the next tasks in cooperation with the troops fighting to the north or the carrying out of new tasks in the south of Russia."<sup>3</sup> Consequently, the main task for the main grouping (1st Panzer Group, 6th and 17th Armies) was the encirclement and destruction of our troops on the Right Bank Ukraine and then to develop the offensive deep into our territory. The other grouping (11th Army, 3d and 4th Romanian Armies) was to launch an auxiliary thrust in the area of the Odessa Military District.

The degree of detecting the established assault groupings from Wlodawa to the Carpathians can be seen by using Table 3. Its data point out directly that the KOVO Staff as a whole had detected the concentration of enemy troops. However, the district's reconnaissance had not been able to determine its main assault grouping, the first echelon of which included 13 infantry divisions. The staff felt that on this sector (170 km) 4 infantry and 3 motorized divisions had been positioned in the first echelon and in the near depth. This erroneous conclusion was subsequently to have a negative effect upon the course of hostilities.

Table 3\*

Formations	Total Formations From Wlodawa to Carpathians		Including		On Secondary Axis	
	Actual	Intel. Data	On Axis of Main Thrust Actual	Intel. Data	Actual	Intel. Data
Infantry Divisions	28	to 21	17	11	11	to 10
Tank Divisions	5	3	5	1	—	2
Mechanized Divisions	4	4	4	4	—	—

\* TsAMO, folio 229, inv. 161, file 191 (map); folio 500, inv. 119, file 14 (map).

The first strikes by enemy artillery were a surprise for the formations located close to the state frontier as well as for the fortified areas and border detachments. For example, within the zone of artillery fire were the 87th and 124th Rifle Divisions, the 41st Tank Division located in the area of Vladimir-Volynskiy and the 45th Rifle Division in the Lyuboml area.<sup>4</sup> Moreover, coming under air strikes were airfields, control posts, road junctions, dumps and formations in camps, in positions or moving up to the frontier. After the artillery softening up, the units of the 6th and 17th Field Armies went over to the offensive. They crossed the Western Bug comparatively quickly using bridges which had not been blown up and exploited the advance in depth.

The aggressor concentrated its main efforts in the zone of the Southwestern Front on the left flank of the 5th Army and its boundary with the 6th. The decisive massing of enemy forces here led to a situation where the initial thrust by its 13 infantry divisions was taken by 3 rifle and cavalry divisions of Soviet troops. The latter in terms of numerical strength were one-half that of the Nazis and for this reason the enemy succeeded in achieving superiority. And the commitment of 2 panzer divisions on this axis made it possible for the enemy to sharply increase the balance of forces in its favor and advance rapidly.

Our units and formations were alerted and moved up to their assigned areas under enemy artillery shelling and air strikes. Only the formations of the 12th Army and partially the 26th Army were able to move up to the frontier in a comparatively calm situation and take up their lines according to the cover plan. The Nazis operated with limited forces in their zones.

Of the 10 first-echelon formations of the 5th, 6th and 26th Armies, only the 62d Rifle Division (commander, Col M.P. Timoshenko), the 87th (commander, Col N.I. Vasilyev), the 41st (commander, maj Gen G.N. Mikushev) and the 99th (commander, Col N.I. Demonyev) were able to take up their lines according to the cover plans. The remainder went over to the defensive under the effect of the advancing enemy on completely unequipped terrain. Large gaps were formed between them. For example, between the formations of the 87th and 124th Rifle Divisions, a gap arose of 20 km and one of 15 between the 124th and 13th Cavalry Divisions. The enemy shock forces rushed in here. Even on the first day, in the zone of the 5th Army and on the boundary with the 6th (in a sector up to 100 km), with units of 6 infantry and panzer divisions it broke through up to 30 km in depth having defeated our 87th and 124th Rifle Divisions.<sup>5</sup> In addition, the effectiveness of the attacks by the enemy ground troops was supported by the aviation which immediately won strong air supremacy.

Under such conditions, Headquarters High Command viewed enemy actions "as the achieving of slight successes" and demanded that the Southwestern Front "by concentric strikes on the general axis of Lublin with the

forces of the 5th and 6th Armies and at least 5 mechanized corps with air support, encircle and destroy the enemy grouping advancing on the front of Vladimir-Volynskiy—Krystynopol and by the end of 24 June, capture the area of Lublin."<sup>6</sup>

Both headquarters as well as the front commander, in having a poor knowledge of the actual position and state of their troops, the enemy grouping and forces, demanded just offensive actions. Here they did not consider that the mechanized corps were some 150-250 km away from the enemy breakthrough sector. Thus, Col Gen M.P. Kirponos ordered the XV and IV Mechanized Corps in the morning of 23 June to attack on the axis of Radekhov, Sokal, while the VIII Mechanized Corps by this time was to advance from Stryi and concentrate in the Gorodok area ready to advance to the north.<sup>7</sup>

However, on 23 June, the Nazis continued to exploit the success by assault groupings against Lutsk and Berestechko, broadening the gap between the 5th and 6th Armies. At mid-day they found a weak point in the defenses of the 6th Army on the Rava-Russkaya sector and here launched a strike by the XLIX Mountain Rifle Corps of the 17th Army.

In this situation, the XV and IV Mechanized Corps were to begin their counterstrike. On the morning of 23 June, the XV Corps (commander, Maj Gen I.I. Karpezo) went over to the offensive in the Radekhov area and in the course of this its units fighting in a zone up to 70 km wide suffered heavy casualties and were forced to retreat.<sup>8</sup> The IV Mechanized Corps (commander, Maj Gen A.A. Vlasov) did not take any part in the counterstrike. Its main forces were directed to the Mostisk area for launching a counterstrike against the enemy advancing in the boundary between the 6th and 26th (commander, Lt Gen F.Ya. Kostenko) Armies. Only the 32d Tank Division was able to advance together with the XV Mechanized Corps. At noon of 24 June, the XX Mechanized Corps (commander, Maj Gen S.M. Kondrusev) went over to the attack in cooperating with the 135th Rifle Division (commander, Maj Gen F.N. Smekhotvov) from a line of Voynitsa, Boguslavskoye. Their units advanced to a depth of 7-10 km and captured Lokacha.<sup>9</sup> However, without having an air cover and without having lost one-half of the tanks, the corps without being supported by other formations from the 5th Army retreated to the initial positions.

It must be pointed out that for the front's aviation, with the start of the war, low intensity of operations [deystviya] was characteristic. Thus, over the first three days the bombers made a total of just 463 aircraft sorties in the aim of destroying the enemy panzer columns and this was just 1 sortie per aircraft over the designated time. This was explained by the disrupted command of the aviation and by the delayed setting of missions for it. As a result, the bomber aviation frequently launched strikes against secondary Nazi groupings. The fighters were



basically employed for covering the airfields, the positions of the front staff, the reserves and major population points.

From the morning of 25 June, upon orders of the front commander, the IX and XIX Mechanized Corps went over to an offensive from the north. The IX Mechanized Corps (commander, Maj Gen K.K. Rokossovskiy) to the south of Klevan squeezed the enemy III Motorized Corps while the XIX Mechanized Corps (commander, Maj Gen Tank Trps N.V. Feklenko) pushed the enemy units 25 km back to the southwest of Rovno.<sup>10</sup> But these comparatively successful actions were not supported by a thrust from the south which Col Gen M.P. Kirponos launched on the following day due to the incomplete concentration of troops. On 26 June, the largest tank engagement in 1941 developed in the area of Lutsk, Dubno, Brody. The counterstrikes of the IX and XIX Mechanized Corps from the north and VIII and XV from the south developed into a meeting engagement with the Nazi 1st Panzer Group and a portion of the forces from the 6th Field Army (4 panzer and 5 infantry divisions).

The IX and XIX Mechanized Corps during 26-27 June were heavily engaged with the formations of the enemy III Motorized Corps, they caused it significant losses, but because of air strikes were forced to retreat to an area to the west of Rovno. The VIII Mechanized Corps of Lt Gen D.I. Ryabyshev achieved better results. Having made a 300-km march in the course of which he lost around 400 tanks due to bombings and technical reasons, the corps in an organized manner entered battle, it attacked the flank and rear of the 16th Panzer Division and advanced 12 km.<sup>11</sup> However, during the night of 27 June, it was ordered to disengage and concentrate behind the XXXVII Rifle Corps (commander, Brig Cmdr S.P. Zybin) which held the defenses on the line of Novyy Pochayev, Gologury. This was explained by the fact that the front staff, having seen the poor results of the counterstrikes, decided that the XXXI, XXXVI and XXXVII Rifle Corps (the front reserve) would take up a strong defense on the line of Stobykhva, Lutsk, Kremennets, Gologury, pull the mechanized corps behind it and prepare a strong counterstrike with the aim of defeating the enemy which had broken in. This corresponded to the developing situation. In the evening of 26 June, the orders were issued to the troops. The mechanized corps began to disengage. However, Headquarters did not approve the decisions and ordered the counterstrikes be continued in the morning of 27 June.<sup>12</sup>

On 27 June, the retreating formations of the VIII Mechanized Corps were turned back. Its 34th and 12th Tank Divisions numbering 210 tanks at 1400 hours launched a strike to the northeast into the rear of the enemy 1st Panzer Group. Over a period of 2 days, they advanced 32 km and reached Dubno from the west and caused substantial damage to the enemy, having forced the enemy command to throw in significant forces as a check. However, the other mechanized corps were

unable to enter battle due to the high losses and poor technical state and thereby support the fighting of the VIII Mechanized Corps.

The main reasons for the unsuccessful actions of the Soviet troops on the Southwestern Sector were: the delay in bringing the front's field forces and formations to combat readiness; the unrealisticness of the cover plans leading to the unsuccessful concentration of our grouping along the state frontier; the poor organization of combat on all levels; the poor employment of aviation and its control.<sup>13</sup>

The rear bodies operated unsatisfactorily. On the Southwestern Front, the depots and dumps positioned on the line of Kovel, Rovno, Lvov, Drobych, were seized by the enemy during the first days of the war. The second echelon of supply depots located along the line of Korosten, Shepetovka, Zhitomir and Vinnitsa, was 200-300 km from the troops. Moreover, the rear units and combat formations did not receive the motor transport assigned to them from the national economy. This led to a situation where the troops experienced a need for logistic supplies. Thus, in the 5th Army by 25 June there was a sharp scarcity of ammunition and fuel.

The above-listed factors had an extremely negative effect on the course of the border engagement. The 87th and 124th Rifle Divisions were surrounded. The Southwestern Front, regardless of its superiority in forces, suffered heavy losses. They were 2,648 for tanks alone.<sup>14</sup> However, the counterstrikes by the mechanized corps in the area of Dubno, regardless of their poor organization, played an essential role. They checked the advance of the 1st Panzer Group for a week and caused it significant losses; most importantly they thwarted the enemy's plan which was aimed at breaking through to Kiev and surrounding the main forces of the Southwestern Front on the Lvov Salient. But it was not possible to alter the unfavorable development of events in carrying out the counterstrikes. The enemy pushed deeply into the front's defenses and continued to advance on the Rovno axis.

In considering the exacerbation of the situation, Headquarters on 30 June ordered the troops of the front to be pulled back to the old state frontier. With the start of the retreat, the most difficult situation arose on the boundary of the 5th and 6th Armies in the area of Rovno, Ostrog. Here the enemy, in committing its second echelons of the III and XLVIII Motorized Corps to battle, boosted its efforts and pushed to Zhitomir and Shepetovka.

In order to prevent the enemy grouping from pushing in further, the commander of the 5th Army on 1 July launched a counterstrike with the forces of the XXII, IX and XIX Mechanized Corps and the XXVII Rifle Corps (commander, Maj Gen P.D. Artemenko). The hurriedly prepared counterstrike to the north of Lutsk and to the west of Rovno along a front of 100 km only held up the enemy for 24 hours in the area of Rovno, Ostrog. It was

able to repulse the isolated attacks by the army formations. By the end of 6 July, the enemy with 2 divisions from the III Motorized Corps had reached Novograd-Volynskiy to the west and south. With the same forces of the XLVIII Motorized Corps without a pause it crossed the Izyaslav UR and reached the southern sector of the Novograd-Volynskiy UR along the Sluch River to the south of Polonnoye. The mobile Nazi groupings, in bypassing this UR from the north and south, continued the breakthrough on the general axis of Kiev, disrupting cooperation between the 5th and 6th Armies and creating a serious threat to the 26th and 12th the formations of which had not experienced heavy enemy pressure.

Almost simultaneously on 2 July, from Romanian territory, Nazi and Romanian troops went over to the offensive. In launching the main thrust against the right wing of the Southern Front, they captured bridgeheads on the left bank of the Prut between Lipkani and Iasi. The threat arose of the cutting off of the Southern Front and the envelopment on both sides of the formations of the Southwestern Front.

Under these conditions, the General Staff issued the orders: "The Southwestern Front with one rifle corps is to hold the line along the eastern bank of the Sluch River, and ensure the link with the Western Front. The main forces of the 5th Army are to be pulled back to the area of Ovruch, Korosten, they are to strongly hold the Korosten UR and bring the troops in order; the remaining armies of the front by the morning of 9 July are to be pulled back and take up strongly a line for defense along Novograd-Volynskiy, Ostropol and the Letichev UR."<sup>15</sup> The execution of this task to a large degree depended upon the combat readiness of the URs and the state of the defensive works. On the old frontier in the zone of the front, the fortified areas were positioned in two lines. The strongest was the second which ran along the Korosten, Novograd-Volynskiy, Letichev and Mogilev-Yampolskiy URs. Built before 1937-1938, they had cannon and machine gun casemates, machine gun permanent emplacements and armored turrets. Each of them had from 206 to 439 permanent defensive structures. The UR garrisons before the war were manned according to the peacetime TOE and numbered from 814 to 1,376 men.<sup>16</sup> On the line of Ostrog, Kamanets-Podolskiy in 1938-1939, they built the first line fortified areas: Shepetovka, Izyaslav, Ostropol, Styarokonstantinov and Proskurov. But in line with the moving of the frontier to the west in 1939, their construction was halted. The incomplete structures lacked troops and weapons. However, during the period from 28 June through 5 July, these fortified areas had received up to 40 percent of the personnel and weapons while the second line was up to 80 percent of the wartime TOE.<sup>17</sup>

It is essential to point out that the commander of the 5th Army, even before the start of the retreat, had ordered the 195th Rifle Division arriving from the front's reserve to move up to the Korosten UR and occupy it in the aim of ensuring the planned retreat of the army and the going

over to the defensive there. However, on 5-7 July, the enemy with two motorized divisions broke through in the area to the north of Novograd-Volynskiy, and with two panzer divisions, to the area of Nov. Miropol and continued the offensive against Zhitomir and Berdichev.<sup>18</sup>

By this time it had become clear that the right flank of the 6th Army and the left of the 5th had been finally split. This created a real threat that the enemy mobile formations would come out in the rear of the front's main forces. But the command of the front continued to consider the Kiev sector the most dangerous and its decision was aimed at altering the course of events by launching counterstrikes into the rear of the Kiev enemy grouping. The demand on the 6th and 12th Armies to hold the occupied line exacerbated their already difficult situation.

Thus, in the zone of the Southwestern Front, the aggressor broke through on the Lutsk—Rovno axis. The mobile units of the 1st Panzer Group by the end of 9 July had reached Zhitomir and Berdichev. The troops of the front, having suffered a defeat in the border engagement, were retreating in heavy fighting to the line of Novograd-Volynskiy, Zhitomir, Berdichev, Starokonstantinov, Kamenets-Podolskiy, Mogilev-Podolskiy and Leoyevo.<sup>19</sup>

The unpreparedness of the formations in the cover armies to repel the strong enemy thrusts was the main reason for the unsuccessful fighting at the start of the war. The first echelon divisions had not been brought promptly from their positions and summer camps to the positions designated by the cover plan. Their advance, in a majority of instances unorganized, poorly commanded and under enemy air strikes, led to unjustifiably high losses.

The miscalculations of all levels of command had a negative effect upon the fighting of our troops. Thus, the unsound decisions of Headquarters which had demanded decisive offensive actions did not correspond to the existing situation. Also having a negative effect was the fact that the officers who had replaced those which had been repressed in 1937-1939, in a majority of instances did not possess sufficient experience and training in troop command. The errors made by them in the difficult combat situation served as grounds in many instances for the unjustified relief of the command of the formations, units and subunits. Such practices sapped the confidence of the officer personnel in their effectiveness, it caused enormous losses to the question of combat leadership and ultimately had a deleterious effect on the course of the border engagement.

Regardless of this, the troops of the Southwestern Front by the stubborn defensive of the rifle formations and by the counterstrikes of the mechanized corps to a significant degree slowed down the rate of advance of Army Group South, having caused it great losses. The given circumstance subsequently forced the Nazi Command to divert additional forces to this sector.

### Footnotes

1. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 1215, inv. 1, file 4, sheets 1-4; folio 1245, inv. 1, file 9, sheets 1-3.
2. Ibid., folio 131, inv. 8664, file 16, sheets 10-11.
3. "Sbornik voyenno-istoricheskikh materialov Velikoy Otechestvennoy voyny" [Collection of Military History Materials of the Great Patriotic War], Moscow, Voenizdat, No 18, 1960, pp 56, 57.
4. TsAMO, folio 113, inv. 881474, file 12, sheet 147, 148, 161.
5. Ibid., folio 229, inv. 9749, file 371, sheets 4-11.
6. Ibid., inv. 111, file 112, sheet 5.
7. Ibid., inv. 161, file 112, sheets 7, 12, 13.
8. Ibid., folio 8, inv. 9306887, file 99, sheet 133.
9. Ibid., folio 229, inv. 131, file 112, sheet 18.
10. Ibid., sheet 21.
11. Ibid., inv. 161, file 112, sheet 16.
12. Ibid., sheet 19.
13. Ibid., sheet 37.
14. Ibid., folio 38, inv. 11353, file 877, sheet 135.
15. Ibid., folio 48A, inv. 1554, file 9, sheet 203.
16. Ibid., folio 131, inv. 12507, file 25, sheet 4.
17. Ibid., inv. 179382, file 209, sheets 7, 31-36, 70-78.
18. Ibid., folio 229, inv. 161, file 112, sheet 77.
19. "Operatsii Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voyne 1941-1945" [Operations of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, Vol 1, 1958, p 147.

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### Improving Military Medical Service During Great Patriotic War

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[Article, published under the heading "Military Economy and Rear Services," by Col Gen Med Serv F.I. Komarov, Hero of Socialist Labor, winner of the USSR State Prize and Academician of the USSR Academy of Medical Sciences: "Improving the Military Medical Service During the Years of the Great Patriotic War"]

[Text] On the basis of the experience of providing medical support for the fighting of the Soviet troops in the area of Lake Khasan, on the Khalkhin-Gol River and particularly during the Soviet-Finnish War during the prewar years measures were outlined to improve further the medical service of the Red Army. These included the elaboration of a number of documents governing medical support for the troops under wartime conditions, improving the organization and establishment of the medical service and much else. Thus, it was recognized as advisable to replace positions in the battalions by feldshers [middle-level medical personnel], to strengthen the medical battalions of the divisions with surgeons, set up hospitals for lightly wounded, and move hospitals from the divisional level of the medical service to the army one, and constitute separate medical reinforcement companies (ORMU). However, not everything that was planned was carried out by the start of the war.

The treacherous attack by Nazi Germany on the Soviet Union sharply altered the activities of military and civilian public health. Medical support for the Armed Forces in the heavy and bloody fighting of the initial period required a restructuring of the entire public health system for working under the new, very difficult situation.

During the first period of the war, the conditions for troop medical support were exceptionally complex. Due to the enforced retreat of the Soviet forces, many medical units, facilities and headquarters bodies were not able to be set up, were put out of action or captured by the enemy. In the operational [deystvuyushchiy] army there was an acute shortage of medical service facilities. Thus, in the course of the Smolensk Defensive Engagement in July-August 1941, the armies of the Western Front had less than one-third of the TOE medical units and facilities. At the same time, hundreds of military hospitals were not operating since they were being relocated from the border regions of the nation to the east.<sup>1</sup> They were also in short supply in the rear.

Just how bad the situation was for the medical service of the operational [deystvuyushchiy] army is persuasively seen from the report by the Chief of the Medical Section of the Western Front, Mil Physician 1st Rank M.M. Gurvich, of 30 July 1941 and forwarded to the chief of the Red Army Medical Directorate. In particular it



pointed out: "In the process of fighting all the medical facilities located on the territory of western and partially eastern Belorussia were not deployed. As a result, the front was deprived of 36 surgical hospitals and 12 infectious hospitals, 13 evacuation receiving points, 7 evacuation point headquarters, 3 ambulance companies, 3 medical dumps and 3 headquarters of the army hospital bases, evacuation hospitals for 17,000 beds and 35 other different medical units and facilities. The supplies of the medical facilities remained at the staging areas and were destroyed by fires and enemy bombing. The medical facilities constituted on the territory of eastern Belorussia remained without supplies."<sup>2</sup> A similar situation arose on the other fronts.

According to the order of the NKO [People's Commissariat of Defense] of 1 August 1941, rear headquarters bodies were formed for the center and in the field. All the rear services, including the Medical Directorate as well, were put under the chief of the Red Army Rear Services.<sup>3</sup> Somewhat later, in line with the sharply increased amount of work and the difficulty of the tasks being carried out, the Red Army Medical Directorate by the Order of the USSR NKO of 11 August 1941 was reorganized as the RKKA Main Military Medical Directorate (GVSU RKKA). The Order No. 275 on the GVSU of 17 August 1941 emphasized: "As of this date, the directorate assigned to me is to be named the Main Military Medical Directorate of the Red Army."<sup>4</sup> The GVSU was to include directorates (medical-evacuation, personnel and training, medical and sanitary supply) as well as a number of sections and divisions, the Scientific Medical Council and the Inspectorate of the Medical Service.<sup>5</sup> The GVSU was to be headed by the divisional physician Ye.I. Smirnov who by the start of the war had 2 years of experience in leading the Red Army Medical Service.

At the start of the war, the medical service was primarily confronted with the tasks of evacuating sick and wounded and bringing the units and facilities from under enemy attack. From the first wartime days, the main principle for the activities of the military medics was transporting wounded from the battlefield under any conditions and at any time of the day. The observance of this was greatly aided by the Order of the USSR NKO No. 281 of 23 August 1941 "On the Procedure for Submitting Military Medical Workers and Stretcher Bearers for Governmental Decoration for Good Military Work" which was put into effect by telegram.<sup>6</sup> According to this document, the rescuing of wounded soldiers on the battlefield was considered equal to a military feat. The importance of the order was that to a large degree it ensured the greater activeness of the personnel in rescuing wounded defenders of the motherland, their rapid directing to the medical stations and therapeutic facilities and, consequently, their rapid recuperation and return to service and labor. Evacuation distribution points (REP) were set up to improve leadership over the evacuation of wounded from the operational [deystvuyushchiy] army.

With the start of hostilities on the fronts, the medical service bodies began to rapidly deploy their forces under the wartime conditions. Representatives of the GVSU were sent to the most crucial areas of the front to provide aid in forming the medical units and facilities and organizing their work. In order to provide the medical service with personnel, the military medical schools conducted an early and accelerated graduating of officer candidates and students and reserve medical personnel was called up for military service. By the Decree of the GKO [State Defense Committee] of 22 September 1941, the treatment of sick and wounded military in the rear of the nation was entrusted to the USSR People's Commissariat of Public Health (NKZ). The headquarters bodies of the NKZ hospitals, the directorates of the evacuation stations, remained under the GVSU. In the rear they continued constituting the NKZ evacuation hospitals.

The significant deterioration in the military economic status of the nation, the difficulties with human resources and particularly with medical personnel, the maneuvering nature of hostilities necessitated the carrying out of a number of organizational measures in 1941-1942 in the Soviet Army and these also concerned the medical service. For example, with the aim of rationally employing the available personnel, increasing the flexibility of control and the mobility of the medical service units and facilities, the vehicle surgical detachments and the headquarters of the army hospital bases were eliminated (leadership of the hospital bases was entrusted to the directorate of the field evacuation stations), the hospital company of the medical battalions in the divisions was reduced (replaced by a hospital platoon), the number of separate medical reinforcement companies for the armies was cut in half, and instead of the troop and army field hospitals they set up a unified field mobile hospital with reduced personnel (by 200 beds). The TOE number of orderlies and stretcher bearers was substantially cut back as well as the amount of motor transport.<sup>7</sup> All these forced organizational measures greatly impeded the already difficult work of the military medics.

The experience of medical support for the first wartime months urgently required a systematizing of treatment for lightly wounded within the operational [deystvuyushchiy] army and without sending them to the rear of the nation. In December 1941, the GVSU instituted the army and front hospitals for lightly wounded (GLR) and these in the course of the last war played a major role in quickly returning the wounded and ill servicemen to battle.<sup>8</sup> Since a majority of the positions called up from the reserve or arriving immediately after completing school had little knowledge of the forms and methods of work adopted in the army in wartime, the GVSU steadfastly carried out the demands of a unified military field medical doctrine which had been generally formulated on the eve of the Great Patriotic War. This provided a standard understanding of the occurrence and development of wounds and illnesses, the principles of surgical and therapeutic work under military field conditions, a

single military school and uniform views on the methods of preventing and treating wounds and illnesses, succession in executing medical measures in various stages of evacuation, the obligatory presence of concise and clear medical documentation contributing to a viable triage of the victims as well as succession and consistency in the medical evacuation measures.<sup>9</sup> The doctrine was worked out most completely later on at the 5th Plenum of the Military Medical Council under the GVSU Chief in February 1942.

The introduction of the requirements of the unified field medical doctrine was greatly aided by the thorough organizational activities of the personnel from the GVSU, the main medical specialists of the fronts, armies and evacuation stations as well as the plenums of the Scientific Medical Council where they discussed the occurrence, clinical picture and treatment of traumatic shock, they examined the ways for improving the system of medical support for the troops and, in particular, the organizational principles for specialized medical aid and so forth.

The instructional letters and directives of the GVSU and the scientific practical conferences of varying level and scale also contributed to a high scientific-procedural level in the special training of various categories of medical personnel.

The experience of the medical support for the Moscow Counteroffensive showed the necessity of close cooperation between the army and front medical service elements, increased maneuverability of its units and facilities and the obligatory presence of reserve forces even in the most difficult situation.

As a result of the defeat of the Nazi troops at Moscow, better conditions arose for systematizing the activities of the medical service of the operational [deystvuyushchiy] army. In December 1941, a decision was taken to return to the operational army the evacuation hospitals on their way to the east and with a capacity of 66,000 beds. In February 1942, they began the reevacuation of the evacuation hospitals from the military districts (142,500 beds). New field mobile hospitals continued to be organized. By September, 51.7 percent of the beds had been concentrated in the armies and at the fronts and this largely explains the better treatment of the sick and wounded in the operational army.

A solution was also provided to one of the most important organizational questions of promptly informing the medical service chiefs about all essential changes in the combat situation. The absence of such information was one of the reasons for the shortcomings in organizing medical support. The USSR NKO in its order of 10 November 1942 demanded that the military councils of the fronts and armies, the commanders and commissars of the troop formations and units pay more attention to the medical and sanitary support of the troops and inform the medical service chiefs about changes in the combat situation.

Due to the efforts of the GVSU by the end of the first period of the war, the deployment of the medical service had been completed. Regardless of all the difficulties, it had achieved positive results. In 1941, 48.8 percent of the total number of sick and wounded returned to service and in 1942 the figure had reached 75.4 percent<sup>10</sup>

**Medical support for the operations [operatsii] in the second period of the war**, as before, was provided under conditions of a shortage of medical forces. An increase in the bed network, particularly in the army hospital bases (GBA) and front hospital bases (GBF) during this period was achieved by organizing new medical facilities as well as by the reevacuation of the evacuation hospitals from the nation's rear to the hospital bases of the operational army.

In the operational army there was an increase in the number of field mobile hospitals, the proportional amount of beds in which by the end of the second period of the war reached 25.1 percent of the total capacity in the bed network of the army and front hospital bases.<sup>11</sup> However, these hospitals were still in short supply.

The number of GLR increased substantially. The TOE beds in these hospitals were one-third of the number of beds of the GBA and GBF. Their activities were organized on the basis of the "Regulation Governing the Hospitals for Lightly Wounded and Slightly Ill," "Instructions for Organizing the Treatment of Lightly Wounded and Slightly Ill" and "Instructions on Medical Triage and Specific Evacuation of So-Called Lightly Wounded in the Field Medical Service" which had been approved by the GVSU chief in 1942. Treatment at the GLR was combined with the military and special training of the men carried out by the line commanders and political workers. The GLR became one of the main sources for replenishing the losses of troop personnel.

The GVSU gave important significance to the development of the necessary facilities in the operational [deystvuyushchiy] army for fully realizing the principle of specific evacuation of the sick and wounded. Beginning with the first echelon of the GBA, it was essential to provide an opportunity of rendering specialized medical aid and have a sufficient number of medical facilities specific for this. In December 1942, the unified PPG [mobile field hospital] were transformed into the surgical (KhPPG) and therapeutic (TPPG) field mobile hospitals. The organization of skilled medical aid was systematized. Three main types of specialized KhPPG were established (organized by assigning to the hospitals the appropriate groups of ORMU [separate medical reinforcement company]): for treating persons wounded in the head, neck and spine; for treating persons wounded in the chest and stomach; for treating wounded in the thigh and large vessels. The material prerequisites had also arisen for this: over the period from January 1943 through January 1944, the number of newly constituted ORMU had doubled. The specialization of the GBF hospitals pursued a broader differentiation in the types of specialized medical aid than did the field medical

facilities of the GBA. On the fronts, they additionally established not only specialized single-specialty but also multispecialty evacuation hospitals (EG). The presence of triage-evacuation hospitals (SEG) within the GBF and the organizing of distribution posts and stations on the evacuation routes to the army and front hospital bases contributed to the effective distribution of sick and wounded between the medical facilities of the hospital bases in accord with the required treatment.

The 7th Plenum of the Scientific Medical Council Under the GVSU Chief held in Moscow at the end of April 1943 contributed largely to improving the level of therapeutic work in the hospital bases of the operational [deystvuyushchiy] army and the nation's rear. The plenum discussed the special problems of rehabilitation surgery, the use of a secondary suture, methods of treating firearms wounds to vessels and inflammatory illnesses of the kidneys and lungs. Giving reports at it were the GVSU Chief Ye.I. Smirnov, the Chief Surgeon N.N. Burdenko, the Main Therapist M.S. Vovsi and others.

The experience of medical support was generalized and made available to the entire medical personnel. This was aided by the procedural letters and recommendations and the special instructions of the GVSU and the main medical specialists of the GVSU, the fronts and armies.

The extensive use in the hospitals of blood transfusions and blood substitutes ensured the successful treatment of the sick and wounded. Along with centralized supply of the operational [deystvuyushchiy] army with preserved blood and its preparations, upon instructions of the GVSU, TOE blood transfusion departments and stations began to be organized in the fronts and armies.

In the course of the war an urgent need arose for improving the system of training the leadership of the medical service. On 25 November 1942, the GKO approved the draft decree submitted by the GVSU for reorganizing the Military Medical Academy imeni S.M. Kirov. The academy began focusing in training and indoctrination on preparing the leadership of the medical service.

The experience gained in 1943 showed that for improving medical support for the offensive operations [operatsii], along with other measures, it was essential to boost the TOE capacity of the army hospital bases to 8,000-10,000 beds and establish a sufficiently strong reserve of ready-to-go medical facilities. Without a reserve, it would be impossible to promptly move up the hospital bases behind the advancing troops. The GVSU set such a reserve at approximately 50 percent of the number of beds of the field mobile hospitals available to the army and front medical service chiefs. During this period, there was also a rise in the reserve of facilities directly available to the GVSU. However, this was still insufficient.

The GBA in the first echelon of the GBF began to be deployed closer to the front line than had been the case

during the offensive operations [operatsii] of the first period of the war. Often the GBA in the initial position were not echeloned. On the line where the second GBA echelons were to be located they began setting up the first GBF echelon. Thus, the army had a reserve of hospitals and the maneuverability of the medical service was increased.

There was also the practice of establishing interarmy hospital bases during the offensive operations [operatsii]. These were usually organized on the boundary of two armies and received sick and wounded evacuated from the divisional medical stations and the first line KhPPG. An interarmy hospital base included therapeutic institutions not only of the armies but also of the front. Such a maneuvering of medical facilities was widely employed on the Western Front.

During the third period of the Great Patriotic War, the medical service gained great experience in supporting the troops during the most diverse type and scale of offensive operations [operatsii]. By this time the level of the operational-tactical and special training of the medical personnel had risen substantially. In line with the increased technical equipping of the Armed Forces as well as the combat skill of the personnel, there was a tendency for a decline in the level of medical losses. If, for example, the average coefficient of medical losses in the formations in breaching the enemy defenses in 1942 is taken as one, then in 1944, it had declined to 0.8 and in 1945, to 0.66. However, because of the involvement of an enormous number of troops in the operations [operatsii], the over-all number of medical losses remained very high.<sup>12</sup> And as before the medical service had to make a great effort to successfully carry out the tasks of providing medical support for the troops.

The physical plant of military public health in 1944 had been strengthened. For the needs of the operational [deystvuyushchiy] army, in July 1944, the largest number of hospital beds during the entire war was organized (within the front and in the rear of the nation), and over one-half of these (55.7 percent) was in the army and front rear. Thus, good conditions were established for treating the basic mass of wounded within the operational army. The proportional amount of beds in the field mobile hospitals set up in the army and partially in the front rear increased to 27 percent by the war's end. There was a noticeable rise in the number of medical facilities in the army. The medical service had available 6,000-8,000 beds while the armies operating on the axis of the main thrust of a front had up to 9,000 beds. This made it possible to provide skilled medical aid in direct proximity to the battlefield. In comparison with 1943, there was a marked increase in the capacity of the hospital bases on a majority of the fronts. Often this reached 70,000-80,000 regular beds. Here there was also an increase in the relative supply of beds for the armies. For example, the First Belorussian Front in the Vistula-Oder Operation had 12,820 beds per army (including the army and front hospitals), and 15,180 beds in the Berlin Operation.<sup>13</sup>



During the third period of the war, a system of staged treatment of sick and wounded was more clearly organized as they were evacuated for special treatment. The improved organization of specialized medical aid in the troops was greatly aided by the instructional and procedural guidelines worked out and revised at the GVSU. The differentiation of specialized medical aid was continued in the hospital bases of the fronts and rear of the nation. By the war's end, the number of types of specialized beds in the hospital bases of certain fronts reached 18-20 and more.<sup>14</sup> Due to this it was possible to achieve successful recovery of complicated and severe wounds and illnesses.

The desire to bring the medical service forces as close as possible to the forward line of the front as well as solve the problems of the inferior level at the expense of the forces of the superior one was a characteristic feature in the medical support for the troops during the third period of the war. For example, in individual instances, the first line KhPPG began to be set up not behind the divisional medical stations (DMP), as had usually been the case in the second period of the war, but rather instead of them. Such a replacement was also carried out on the operational [operativnyy] level of the medical service, when the first echelons of the GBF more often in the initial position were organized in the areas of the GBA for performing their tasks and they received sick and wounded at the start of an operation [operatsiya] directly from the first line DMP and KhPPG. As a result, conditions were created for providing stronger reserves of the medical service in the aims of maneuvering these in the course of the operation [operatsiya], and in addition the excessive number of stages in the evacuation and treatment of sick and wounded was eliminated. Ultimately, the effectiveness of the medical aid was increased.

Successful treatment of wounded depended not only upon better methods of therapeutic work but also on the use of new medications and other facilities. The hospitals began to widely employ new antimicrobials such as domestically produced sulfamide preparations and from mid-1944, antibiotics such as penicillin and gramicidin. The demand for preserved blood and blood substitutes increased. There was a significant rise in the amount of blood donating, directly in the operational [deystvuyushchiy] army. The front and army blood transfusion stations were largely involved in this.

In organizing antiepidemic defense for the troops, particular attention was paid to limiting the contacts of the personnel with the local population, the active discovery and localizing of epidemic centers on liberated territory, including among repatriates and prisoners of war, and the establishing of dependable antiepidemic barriers on the frontline communications. Substantial aid was provided to the civilian public health bodies which were reorganized on the liberated territory. Regardless of the complex and at times extremely bad sanitary and epidemic situation, the troops and the rear for the first time in the history of wars were protected against the development of mass epidemics.

The measures carried out by the GVSU to restore and strengthen the health of the personnel helped to increase the battleworthiness of the units and formations. The men returned to service after treatment were the basic source for replenishing losses in the units. Thus, the medical service of the First Ukrainian Front (VSU [military medical directorate] Chief, Maj Gen Med Serv N.P. Ustinov) just in the first half of 1944 returned over 286,000 sick and wounded to service while the medical service of the Second Ukrainian Front (VSU Chief, Maj Gen Med Serv P.G. Stolypin) during the last 2 years of the war returned 1,055,000 men to service. As a total during the years of the Great Patriotic War, after successful recovery, 72.3 percent of the wounded and 90.6 percent of the sick were returned to service.<sup>15</sup> No army of the capitalist countries either in the course of World War II or in the previous wars had been able to achieve such high results in the medical support of the troops. The successes in treating the sick and wounded and in returning them to service and to labor in their importance and scope equal the winning of major strategic engagements.

The outstanding achievements of Soviet medicine during the years of the Great Patriotic War became possible due to the fact that in the ranks of the medical service there was a large cohort of prominent specialists, including 5 active members of the USSR Academy of Sciences, 22 honored scientists, 275 professors, 308 doctors of medical sciences and around 2,000 candidates of medical sciences.<sup>16</sup>

The medical service was skillfully led by the Soviet Army GVSU Chief, Col Gen Med Serv Ye.I. Smirnov and the Chief of the Medical-Sanitary Directorate of the Navy, Maj Gen Med Serv F.F. Andreyev.

The finest representatives of the medical service were assigned to crucial posts of chief specialists of the Soviet Army and Navy. Thus, the Academician of the USSR Academy of Sciences, Col Gen Med Serv N.N. Burdenko, was the Chief Surgeon of the Soviet Army and his deputies were the professors and Lt Gens Med Serv S.S. Grigolav and V.N. Shamov and Maj Gen Med Serv V.S. Levit. The chief specialists in the other sectors of military medicine were also prominent medical workers and professors such as the therapist, Jam Gen Med Serv M.S. Vovsi, the epidemiologist, Maj Gen Med Serv T.Ye. Boldyrev, the hygienist, Maj Gen Med Serv F.G. Krotkov, and the infectious disease specialist, Maj Gen Med Serv I.D. Ionin. Lt Gen Med Serv Yu.Yu. Dzhanelidze was the Chief Surgeon of the Navy and Prof, Col Med Serv A.L. Myasnikov was the chief therapist.

In its daily activities during the war years, the military medical service relied on the constant aid and support of the party and the government. The party and soviet bodies at the center and on the spot gave constant attention to protecting and restoring the health of the servicemen, they aided in overcoming difficulties and directed the national patriotic movement to provide the

greatest possible aid to the medical service and to the civilian public health bodies in treating the sick and wounded.

The large army of medical workers protected the health of our military. They unstintingly carried out their military and service duty, showing great awareness, ardent patriotism and total dedication to the socialist motherland. Over 116,000 persons from the Armed Services medical service and 30,000 workers in civilian public health were awarded orders and medals for their intense labor, courage and heroism, 50 of the most outstanding were awarded the title of Hero of the Soviet Union and Hero of Socialist Labor and 18 persons became winners of the three degrees of the Order of Glory. USSR orders were presented to 47 military medical units and facilities.<sup>17</sup>

The experience gained by Soviet medicine during the years of the Great Patriotic War is being successfully employed in our days. The daily intense work of the military medics in peacetime and their feats in carrying out their international duty in Afghanistan persuasively show that the medical service of the Soviet Armed Forces is ready to carry out its military and professional duty.

#### Footnotes

1. "Ocherki istorii sovetskoy voyennoy meditsiny" [Essays From the History of Soviet Military Medicine], Leningrad, Meditsina, 1968, p 199.

2. N.G. Ivanov, A.S. Georgiyevskiy and O.S. Lobastov, "Sovetskoye zravookhraneniye i voyennaya meditsina v Velikoy Otechestvennoy voyne 1941-1945" [Soviet Public Health and Military Medicine During the Great Patriotic War of 1941-1945], Leningrad, Meditsina, 1985, p 53.

3. Prior to this, the Medical Directorate, the Main Quartermaster and Veterinary Directorates of the Red Army were under the deputy people's commissar of defense, MSU G.I. Kulik.

4. Archives of the Military Medical Museum (AVMM), folio 1, inv. 61829, file 7, sheet 42.

5. Ibid., sheet 43.

6. N.G. Ivanov, A.S. Georgiyevskiy and O.S. Lobastov, op. cit., p 39.

7. Ibid., pp 56, 57.

8. *Voyenno-meditsinskiy zhurnal*, No 5, 1970, pp 64-67.

9. "Bolshaya Meditsinskaya Entsiklopediya" [Large Medical Encyclopedia], Moscow, Meditsina, Vol 14, 1980, p 353.

10. "Istoriya voyennoy meditsiny" [History of Military Medicine], Leningrad, Izd. Voyenno-meditsinskoy akademii, 1982, p 72.

11. "Ocherki istorii sovetskoy....," p 246.

12. *Voyenno-meditsinskiy zhurnal*, No 5, 1985, p 13.

13. N.G. Ivanov, A.S. Georgiyevskiy and O.S. Lobastov, op. cit., p 112.

14. Ibid., p 120.

15. "Tyl Sovetskikh Vooruzhennykh Sil v Velikoy Otechestvennoy voyne 1941-1945 gg." [Rear Services of the Soviet Armed Forces in the Great Patriotic War of 1941-1945], Moscow, Voenizdat, 1977, pp 321, 322.

16. *Voyenno-meditsinskiy zhurnal*, No 5, 1985, p 14.

17. Ibid., No 5, 1980, p 13.

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MSU M.V. Zakharov

00010001g Moscow VOYENNO-ISTORICHESKIY  
ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 51-55

[Article, published under the heading "Military Leaders and Generals," by Hero of the Soviet Union, Army Gen S.P. Ivanov: "MSU M.V. Zakharov"; the article was written on the occasion of the 90th birthday of Mar Zakharov]

[Text] There are persons for whom the profession of defending the motherland is the main cause of all their life. No matter how many hardships and difficulties befall them, no matter how harshly fate has dealt with them, they always are an example of unswerving loyalty to military duty, ardent patriotism, unprecedented courage and steadfastness and an inexhaustible thirst for knowledge. Among such persons is the twice Hero of the Soviet Union, MSU Matvey Vasilyevich Zakharov.

M.V. Zakharov was born on 5 (17) August 1898 in the village of Voylovo, presently Staritskiy Rayon of Kalinin Oblast, in a poor peasant family. His childhood was hard. Soon, hoping to improve their circumstances, his parents moved to St. Petersburg. Here began the labor activities of the young man. He soon found his way in the unfamiliar large city. From his worker comrades Matvey Zakharov learned about the Bolsheviks. The thoughtful young man quickly investigated the situation and the Bolshevik ideas completely won over his heart. In February 1917, he joined the worker militia and then the Red Guard. In one of the Red Guard detachments in October 1917, Matvey Vasilyevich participated in storming the Winter Palace and in the fighting to repel the drive of the Cossack cavalry which had broken through to revolutionary Petrograd. These events

became the baptism in fire for the future marshal and the starting point for a great military and personal career. In December 1917, Matvey Vasilevich Zakharov became a member of the RKP(b) [Russian Communist Party (Bolshevik)]. Membership in the Leninist party further raised his feeling of responsibility for the fate of the revolution and for defending its victories.

In clearly realizing in what a difficult situation the Soviet nation was in being surrounded by a ring of White Guards and interventionists, M.V. Zakharov did not reflect long on whether he should join the Red Army which was just beginning to be organized. The main thing that determined his fate was an awareness that the young republic needed soldiers and needed a Red Army. In February 1918, Matvey Vasilevich became an officer candidate in the 2d Soviet Petrograd Artillery Courses and on completing these he participated in fighting on the Southern Front, in commanding a battery and then a battalion from the 39th Rifle Division of the 10th Army.

The inquisitive mind, a bent for analysis and the breadth of thinking of the young artilleryman did not go unnoticed on the part of the command. He was sent again for studies, only this time to the Higher Moscow School for Staff Service. Later in a position of the chief of artillery supply in a rifle division and then assistant chief of staff of a brigade for operations [operativnyye chasti] in the 34th Rifle Division, Matvey Vasilevich fought against the Denikin troops on the Southeastern and Caucasian Fronts.

The last salvos of the Civil War had died away. The industriousness, tenacity, principledness and exceptional conscientiousness in performing official duties made it possible for M.V. Zakharov over a number of years to work successfully in staff positions. But knowledge was clearly lacking. For this reason he went to Kharkov for repeat courses for senior and middle-level command personnel and a year later became a student on the Supply Faculty of the Military Academy imeni M.V. Frunze. After completing this he worked on the staff of the Belorussian Military District initially as assistant chief and then chief of the organization-mobilization section (1929-1932).

A thirst for knowledge caused M.V. Zakharov to return again to the Military Academy imeni M.V. Frunze and now on the operations faculty. Then followed more service on the staff of the Belorussian Military District, where Matvey Vasilevich headed the operations section. For some time he was in command of a regiment in the 8th Rifle Division of this district. The unit under his command achieved excellent results in military and political training. During that period, Matvey Vasilevich Zakharov showed high organizational abilities and the qualities of an intelligent and thoughtful solely-responsible commander.

In 1936, M.V. Zakharov was sent to study at the General Staff Academy. A year later he completed it early and in

July 1937 was approved as the chief of staff of the Leningrad Military District and in May of the following year, assistant chief of the General Staff.

An important point in the military biography of M.V. Zakharov was his involvement in 1940 in the liberation campaign in Bessarabia and Northern Bukovina. During this period, Maj Gen M.V. Zakharov headed the staff of the 12th Army. Soon thereafter Matvey Vasilevich was appointed chief of staff of the Odessa Military District.

M.V. Zakharov was completely dedicated to military service. He was interested in everything which shaped the high military and mobilizational readiness of the district troops. Close contact with the personnel and a careful study of the daily life of subordinates in the most diverse situations made it possible for him to go deeply into the psychology of the soldiers and officers, have a good knowledge of their requests and needs and show real concern for them combined with reasonable demandingness for the men and a tactful attitude toward them. He spent a good deal of time in visiting the district units. He paid particular attention to the construction of the defensive lines along the USSR state frontier. Suffice it to say that under his leadership a number of organizational and operational [operativnyy] measures was carried out to cover the new state frontier which ran almost 450 km along the front.

M.V. Zakharov had a delicate feel for the developing situation. A thorough and profound analysis of the incoming intelligence data made it possible for him to draw correct conclusions. During the night of 20 June 1941, the staff of the Odessa District and which with the start of hostilities became the staff of the 9th Army, was brought to the field command post. In turn, the troops were brought to a state of full combat readiness and the district aviation, upon the insistence of the chief of staff, was relocated to the operational [operativnyye] airfields.

From 13 July 1941, Gen Zakharov headed the staff of the commander-in-chief of the Northwestern Sector and from August 1941 was appointed the deputy chief of the Soviet Army Main Rear Directorate.

December 1941 opened up a new page in the military biography of Matvey Vasilevich. In the course of the developing Soviet troop counteroffensive at Moscow, he was entrusted with the crucial post of chief of staff of the Kalinin Front. From that month until the war's end, he successively headed the staffs of the Reserve, Steppe, Second Ukrainian and Transbaykal Fronts.

My first encounter with M.V. Zakharov was in the summer of 1943 on the Kursk Salient. On one of the days in the second half of July, the commander of the Voronezh Front, Army Gen N.F. Vatutin and I, at that time chief of staff of the front, traveled to Korocha where the headquarters of the Steppe Front was located. The representatives of Headquarters, MSUs G.K. Zhukov and A.M. Vasilevskiy were holding a meeting where they



were summing up the results of the defensive engagement and were discussing the question of using the strategic reserves in the forthcoming counteroffensive. Matvey Vasilyevich gave a report at this meeting. From his terse and precise answers to the questions raised I realized that he was an energetic and strong-willed person, enterprising and demanding with an excellent knowledge of his job. Subsequently, we happened to work together repeatedly in the preparations for and conduct of the Belgorod-Kharkov and Budapest and Vienna Offensive Operations as well as in organizing fighting in the Far East. Each meeting confirmed my first impressions and each time I discovered new qualities in this major operations [operativnyy] worker, a person of unflagging energy and great staff skills.

The staffs of the fronts which M.V. Zakharov led during the years of the last war successfully planned and carried out more than 20 front-level offensive operations [operatsii] and each of these had its particular features and was of an innovative nature. Matvey Vasilyevich, as they say, had his own style. He was able not only to correctly understand and assess a complex operational [operativnyy] situation but also delve deeply into the psychology of enemy conduct and anticipate its actions in a concrete situation. This was the case in the operation [operatsiya] to capture Kharkov.

In the second half of August 1943, the mobile formations of the Steppe Front had cut the main routes running to the city from the west. A threat of encirclement had arisen for the enemy Kharkov grouping. Only one railroad and one highway running to Merefa and Krasnograd still remained available to the enemy.

The front's command was confronted with the question of what decision should be taken in the developing situation. It seemed very enticing to commit forces sufficient to cut this corridor, encircle the Nazis in the city and destroy them there. An immediate storming of the city could be a different solution. Upon instructions of I.S. Konev, the front's staff prepared the corresponding calculations which showed that a great deal of time and the involvement of a large number of troops would be needed to carry out these decisions. And this in turn would lead to significant losses. The staff proposed that the commander in his decision consider the fact that the Germans, under the threat of encirclement, would abandon Kharkov. And when in the evening of 22 August reconnaissance established that the enemy had begun to pull its units out of the city, the formations immediately initiated a night attack on Kharkov. By 1100 hours on 23 August the city had been completely liberated of the occupiers.

A characteristic trait in the work style of M.V. Zakharov was a creative, nonroutine approach to the questions of planning combat, organizing cooperation and the employment of troops in each operation [operatsiya]. He was a supporter of the most decisive forms of combat such as operations [deystviya] to encircle and destroy

large enemy groupings. Examples would be the Korsun-Shevchenkovskiy, Iasi-Kishinev, Budapest and Khingan-Mukden. For example, in the course of the Korsun-Shevchenkovskiy Operation, the Chief of Staff of the Second Ukrainian Front, M.V. Zakharov, ensured high effectiveness in the work of all the command elements. He directed the combat activities of the armies, corps, divisions and their staffs, demanding continuous information and the unswerving execution of orders and instructions. M.V. Zakharov carefully monitored the changes in the situation, he organized cooperation with the troops of the First Ukrainian Front, he personally evaluated the incoming information and along with conclusions and proposals reported on this to the front commander.

In the process of the highly maneuverable offensive actions which were characteristic of the final operations [operatsiya] of the front, a special role rested on the organizing of continuous contact between the command and the troops. Here M.V. Zakharov applied his knowledge and forces to establish a widespread dependable network of wire and radio communications which would cover all formations, units and subunits down to the battalion, inclusively. Special mobile communications centers were set up on vehicles for operating during the offensive at the auxiliary control posts. Motor vehicles, armored vehicles, motorcycles and even aircraft were assigned as back-up equipment.

The staff of the front carried out enormous work under the leadership of Gen Zakharov in planning and preparing the troops for fighting in the desert terrain during the Khingan-Mukden Operation. Due to this, the Transbaykal Front successfully carried out a major operation [operatsiya] in such a difficult theater of operations [deystvii] and in a short period of time had defeated a large enemy grouping head-on.

In October 1945, M.V. Zakharov headed the General Staff Military Academy. His broad knowledge and concreteness in work made it possible for him to rapidly organize the training process and focus the efforts of the faculty and students on a profound and thorough generalization and study of the very rich combat experience gained by the Soviet Army. Matvey Vasilyevich instructed and indoctrinated future military leaders and himself studied constantly. He took a direct part in putting out collections of works and he organized and conducted military scientific conferences. Military games and exercises had the nature of creative searches in solving urgent problems of Soviet military science. For great scientific-theoretical and practical activities, Army Gen Zakharov in 1948 was awarded the academic degree of Professor.

M.V. Zakharov over a number of years held the post of deputy chief of the General Staff of the USSR Armed Forces and was then the chief inspector of the Soviet

Army. Enormous experience in working in the troops came in handy for Matvey Vasilyevich when he held the positions of commander of the Leningrad Military District and the commander-in-chief of the Group of Soviet Forces in Germany. His high organizational abilities and talent as a military leader were most vividly disclosed in the post of the chief of the General Staff of the USSR Armed Forces and USSR First Deputy Minister of Defense. This was a period of revolution in military affairs. The fundamentally new Strategic Rocket Troops and the Air Defense Troops were being organized, the Navy and aviation were being rearmed and the Ground Forces had risen to a new level in military development.

Frequent trips to the troops and fleets and intense work at the General Staff were combined with enormous scientific and research activity. Matvey Vasilyevich is responsible for a number of fundamental works on the questions of military theory and history as well as the instruction and indoctrination of Army and Navy personnel. These include: "Operatsii na okruzheniye" [Encirclement Operations], "Taktika vysshikh soyedineniy" [Tactics of Higher Formations], "O nauchnom podkhode k rukovodstvu voyskami" [On a Scientific Approach to Troop Leadership], "Chelovck i tekhnika" [Man and Equipment], "O printsipakh i metodakh voyennogo obucheniya" [On the Principles and Methods of Military Training] and others. Under the leadership of MSU M.V. Zakharov, the following historical-theoretical works were written: "50 let Vooruzhennykh Sil SSSR" [Fifty Years of the USSR Armed Forces], "Final" [Finale] and "Osvobozhdeniye Yugo-Vostochnoy i Tsentralnoy Yevropy voyskami 2-go i 3-go Ukrainskikh frontov (1944-1945 gg.)" [Liberation of Southeast and Central Europe by the Second and Third Ukrainian Fronts (1944-1945)].

Matvey Vasilyevich Zakharov has lived the bright life of a communist and patriot. He has been a delegate to a number of the party congresses where he was elected a member of the CPSU Central Committee and a deputy to the USSR Supreme Soviet. The Soviet government has shown great regard for his high party and professional qualities, unprecedented courage and heroism in the fight against the enemies of our motherland. He was twice awarded the title of Hero of the Soviet Union and has received many orders and medals of the USSR and a number of foreign states.

On the day of the 90th birthday of MSU Matvey Vasilyevich Zakharov the Soviet people and the soldiers of the armed forces of the USSR and the fraternal socialist countries with gratitude place this name in the rank of glorious sons who are the pride of the Soviet people.

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### Weapons of Air Combat

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[Article, published under the heading "Memoirs and Essays" by Maj Gen (Ret) V.N. Novikov, hero of socialist labor: "Weapons of Air Combat"; during the Great Patriotic War, V.N. Novikov was the USSR deputy people's commissar of armament. During the postwar years he has been the chairman of the USSR Gosplan and deputy chairman of the USSR Council of Ministers]

[Text] During the period of the Great Patriotic War of all types of weapons, the aviation cannons and machine guns were rightly considered the most complicated to develop and produce. Suffice it to say that the aviation machine guns alone had a rate of fire reaching 1,800 rounds a minute and more while the cannons came close to 1,000. Who had developed these unique Soviet weapons?

The first one would mention here is Boris Gavrilovich Shpitalnyy. In cooperation with Irinarkh Andreyevich Komaritskiy, he developed the world's fastest-firing aviation machine gun, the famous ShKAS (Shpitalnyy—Komaritskiy aviation rapid-fire) with a caliber of 7.62 mm and a rate of fire of 1,800 rounds a minute (during those years the best foreign models had a rate of fire of not more than 1,000-1,200 rounds).<sup>1</sup>

The ShKAS gained their baptism in fire in the autumn of 1936 in the skies over Spain, they were employed in China as well as in the Soviet-Finnish War of 1939-1940. With these Soviet aviation, already having heavy-caliber machine guns and cannons, entered the Great Patriotic War.

The ShKAS was not the most rapid-firing Soviet machine gun. Even before the war the designers I.V. Savin and A.K. Norov had submitted an aviation machine gun with a rate of fire of around 3,000 rounds a minute. The same rate of fire was also reached by the ultra-ShKAS developed on the basis of the ShKAS by Shpitalnyy and Komaritskiy.<sup>2</sup> The superfast machine gun was employed in air combat over the Karelian Isthmus in 1939-1940. Another model designed by V.I. Silin, M.Ye. Berezin and P.K. Morozenko had a rate of fire of 6,000 rounds a minute.<sup>3</sup> However, due to the development of aviation cannons, work on these was halted.

The exceptionally high merits of the ShKAS made it possible on its basis to develop a 12.7-mm aviation machine gun. This work was carried out by the designers under the leadership of the young, talented engineer, Semen Vladimirovich Vladimirov. The ShVAK machine gun (Shpitalnyy—Vladimirov aviation heavy caliber) became a powerful weapon in fighting enemy aircraft. Later Vladimirov "converted" the heavy caliber machine gun into a 20-mm aviation cannon which greatly surpassed all foreign models.<sup>4</sup> This was employed for the first time in fighting over the Khalkhin-Gol River

in August 1939. At the beginning of the Great Patriotic War, even light tanks were armed with this.

In 1940, the designers A.A. Volkov and S.A. Yartsev developed a 23-mm aviation cannon which was named the VYa (Volkov—Yartsev).<sup>5</sup> It dependably pierced the armor of light tanks and armored vehicles and became the main weapon of the Soviet Il-2 ground attack planes.

On a day in July 1941, soon after I had been appointed deputy people's commissar of armaments, during a conference a secretary came in:

"Designer Shpitalnyy has arrived and requests you see him."

"Ask him to wait 2 or 3 minutes as I am just finishing with the comrades and then will see him."

Not more than 2 minutes had passed when I came out into the reception area. The secretary reported:

"The designer left."

Soon thereafter Poskrebyshv, Stalin's secretary, phoned.

"Comrade Novikov, how did it happen that you have just been appointed to this post and you are already showing bureaucratism in not receiving designer Shpitalnyy?"

Having explained what had happened, I said that I was ready to meet the designer at any time.

"Comrade Shpitalnyy must be received immediately," emphasized Poskrebyshv, and hung up.

Shpitalnyy came back a week later and although I was in the middle of a conference, I immediately invited him into the office.

"Presently our design bureau is preparing to test a 37-mm aviation cannon the equal of which exists nowhere," Shpitalnyy informed me. "I would very much like for you to visit our design bureau and see this cannon...."

The design bureau was located in a quiet Moscow lane in a 3-story free-standing house with a heavy oak door. Shpitalnyy guided me to the department where work was underway on the "37-mm." Here for the first time I also saw Komaritskiy. Irinarkh Andreyevich spoke objectively about the new aviation cannon as it still had some shortcomings. The aviators had asked that it be made lighter, the ammunition supply increased and so forth. I noticed that certain assemblies of the cannon seemed complicated and I advised, if possible, to simplify them....

On my way back from the design bureau, I immediately went to the people's commissar D.F. Ustinov. I reported on my impressions. I pointed out that although the new aviation cannon would be a powerful weapon in fighting the German aircraft and tanks, it would obviously be difficult to produce.

Dmitriy Fedorovich [Ustinov] asked:

"And how are things going with Nudelman?"

In the design bureau of this young designer, a similar weapon was being developed, however I still did not know what its state was although I guessed that the cannon was ready for testing.

"Go pay a visit to Nudelman soon and take a look with your own eyes. We will take the better of the two models."

It was not possible to go immediately to the design bureau of A.E. Nudelman. Suddenly at 0200 hours in the night Ustinov summoned me and another deputy people's commissar, V.A. Ryabikov. He said that he had just come from Stalin, where he had received an assignment to build a new plant for duplicate production of the 20-mm ShVAK aviation cannons now produced only by the Kovrov plant.

"But can't the Kovrov plant handle the assignment?" I said in amazement.

Dmitriy Fedorovich looked at me unhappily:

"Really, don't you know that the Germans have already tried to bomb Gorkiy? And Kovrov is much closer. For this reason the received instructions make sense."

In conclusion, Ustinov said:

"We must go immediately to Kovrov and have a talk with the plant leadership. We must find out how much space is required for manufacturing the cannons. A draft decree of the State Defense Committee [GKO] must be ready by 0100 hours tomorrow. So there is no time to sleep."

At the plant I was met by the chief engineer G.I. Markelov whom I had known well at Izhevsk. Only he at the plant knew the true purpose of my visit. For the others this was ordinary familiarization with production.

At that time the plant was developing the Degtyarev medium machine gun and modernizing the machine pistol and submachine gun designed by him. Another major product was the ShVAK aviation cannons. I found designer Vladimirov in one of the shops. In showing me the assembly shop, Semen Vladimirovich stopped by a worker and, in explaining the operation which he was performing, commented:



"I feel that aviation will soon need a heavier caliber weapon. My hands are itching to make a more powerful cannon. But for now we must produce as many of the existing ones as possible...."

It was known that in the near future the plant would have to begin producing yet another aviation cannon, the Volkov—Yartsev design. The moving parts and the entire cannon were "more loaded" than on the ShVAK. The over-all dimensions were larger and the cartridge more powerful. Hence, other mounts were required.

The first production buildings had been built at the new site in 5 months. At the end of 1941, everything was ready to produce aviation cannons. However, the defeat of the Nazis at Moscow changed the plans and they decided to refrain from producing the ShVAK. The plant began producing light-caliber antiaircraft cannons which were more essential for the army. Subsequently, the ShVAK were produced in Mednogorsk.<sup>6</sup>

The director of the Kirov plant, V.I. Fomin, at the end of February 1942 was summoned to Moscow. In presenting the order for producing the new 23-mm VYa aviation cannons, People's Commissar Ustinov emphasized:

"The army now needs ground attack planes with just new cannons. The Kovrov workers are doing everything for the front. But no one except you can rapidly put the VYa cannon into production. Tell this to the entire collective."

The first prototypes were expected from the Kovrov workers a month later and a month after that the series production of the new cannons. Even for wartime the period was unbelievable. The staff for putting the new product into production was actually not only the plant administration but also the party committee which considered this work a combat testing of the forces of the plant's designers.

Virtually all the parts and assemblies for the first cannons had been readied before the end of March. On the last days of March, when the VYa cannons were set up for firing, I was again in Kovrov. The plant director led me directly to the shops where the cannons were being manufactured and assembled. Here also were the cannon designers A.A. Volkov and S.A. Yartsev.

We had a look at the main shops. Everywhere they reported on how things were going and where help was needed. The People's Commissariat, I realized, would be responsible just for the main delivery of the special steel for the designers. At that time, it was in short supply, including for the Kovrov workers.

We went to the range. For a comparison we got off a thousand rounds from the VYa and from the ShVAK. There were no jamming. This was a major success for the designers and for the entire plant collective. I shook the hand of the director and the cannon developers.

The pilots were satisfied as the weight of the shell of the VYa cannon, in having a caliber of 23 mm, significantly surpassed the shell of the "20-mm" and the weight of a second volley was 2 kg instead of 1 kg and a bit from the ShVAK. Even the 37-mm American aviation cannon had a half-kilogram less than the VYa.<sup>7</sup>

In returning to the People's Commissariat, I reported to D.F. Ustinov on the setting up of production of the new aviation cannon at Kovrov. Although I informed him that the collective was hard at work, the people's commissar was still alarmed as the VYa should go into series production in April.

"Can they do it?"

"They should," I assured him. "Everything is basically ready for this."

Even before the war, when I was the director of the Izhevsk plant, there they were developing the production of the 12.7-mm heavy caliber aviation machine gun designed by M.Ye. Berezin.<sup>8</sup> Now, I, in meeting with Berezin, constantly said to him:

"It would be a good thing if the machine gun were 'redone' as an aviation cannon, as Vladimirov has done...."

Initially, he deferred from a direct reply, but once said:

"Vladimir Nikolayevich [Novikov], I feel this will work."

At the end of 1943, they were already testing the "20-mm" of M.Ye. Berezin and this operated just as dependably as his heavy-caliber machine gun. The Berezin cannon was half the weight of the ShVAK and much simpler to produce. The B-20 was immediately mounted on the aircraft of S.V. Ilyushin and A.S. Yakovlev.<sup>9</sup>

Finally, I found the time to visit the design bureau of A.E. Nudelman. It was a small, 2-story house: on the first floor were the shops and on the second the service quarters. Aleksandr Emmanuilovich [Nudelman] met me cordially, although somewhat cautiously.

The new aviation cannon was simpler and better designed than the ShVAK. A week prior to the war they had approved its technical specifications and 6 weeks later the prototype was ready. I was interested in why they were developing a 37-mm cannon which was approximately the same as the one undergoing testing of Shpitalnyy.

Nudelman replied:

"Ours will be better. We know the shortcomings of the model of Boris Gavrilovich and have resolved to avoid them."

The confidence of A.E. Nudelman and his comrades was based on real facts. The design bureau had existed for several years. Under the leadership of Ya.G. Taubin and M.N. Baburin and with the involvement of A.E. Nudelman, A.S. Suranov and other workers, the design bureau had developed and then had approved and put into production the MP-6 23-mm aviation cannon.<sup>10</sup>

However, the aviation cannon of the same caliber designed by A.A. Volkov and S.A. Yartsev, regardless of a certain clumsiness of design, was more reliable. For this reason not long before the war the MP-6 had been replaced by the VYa. Many designers had been decorated, including Taubin and Baburin, with Orders of Lenin for developing the MP-6. However, after the MP-6 was taken out of service, they were both arrested.

Thus I realized from the words of A.E. Nudelman that the years spent on developing the MP-6 worked out considering advanced production methods, had not been spent in vain. The work on this cannon had enriched the design bureau collective with significant experience and had provided a great deal of material for developing the new, more powerful NS-37.

The first 37-mm cannon was assembled and even before state testing mounted on the new LaGG-3 fighter. However, the Nudelman cannon was later in testing than the Shpitalnyy model, as its development had started later. In knowing that our aviation armament surpassed the German, we were not in a rush to decide which of the cannons should be preferred, in waiting until the end of their testing.

However, we were hurried. During the first days of August 1941, at around 0300 hours in the night, a number of the workers from the people's commissariat and myself were summoned by D.F. Ustinov and informed that Ustinov had just returned from Stalin who had given instructions to immediately manufacture 40 37-mm caliber cannons of the Shpitalnyy design.<sup>11</sup>

A group of specialists from the design bureau headed by Shpitalnyy's deputy P.K. Morozenko flew off to Izhevsk to organize the production of the new cannon. The people's commissar and I also left for there. The plant had already received the stock for various parts of the cannon. The specialists and the workers who had developed the new type of aviation armament lived and worked under barracks conditions.

Having learned how things were going at the plant, the people's commissar together with the obkom secretary A.P. Chekinov flew to the artillery plant where the barrels were being manufactured for the "30-cm guns." Returning to Izhevsk, they assured us:

"The barrels will be ready."

Having made certain that the work at the plant was clearly organized, we returned to Moscow. Some 20 days

later, I was phoned from Izhevsk and informed that the first cannons had been assembled and one of them had already been fired. But not everything was in order and I had to go there.

"What is the matter?"

"In firing at a target the shells hit flat," replied the director, "and a shell in flight somersaults."

I immediately reported this to Ustinov.

"Fly to Izhevsk," the people's commissar ordered, "and have a look at what is happening there and report back to me immediately."

The leadership of the plant was assembled:

"Have you figured out the reasons?"

"The muzzle brake has been made not in the form of a cap but they have merely drilled openings in the end of the barrel and in such a manner that they cut through the rifling. Because of this the shell loses its stability and somersaults."

I could not help but be interested:

"And what did the Shpitalnyy representative have to say?"

"He explained the somersaulting of the shell by poor quality ammunition. In truth, he admits that they had not fired the prototypes at a target but had merely tested the automatic equipment."

"If that is the case, let's make another muzzle brake."

They explained to me:

"According to Stalin's decision, it is prohibited to incorporate changes in the cannon design without the personal approval of Shpitalnyy. But Boris Gavrilovich asserts that his cannon is in order and he will not change anything."

I turned to the chief engineer of the plant, V.I. Lavrenov:

"Is it a lot of work to change the design of the muzzle brake?"

"No. We merely have to drill a channel in the end of the barrel and then the shell will not touch the riflings where the openings pass through."

"Well then, assemble a cannon with such a drilled out barrel."

"An independent design change?"

"Make not 40 but 41. We can use the extra one for experiments. There will be no violations."

I phoned Shpitalnyy and persuasively asked him to come to Izhevsk. Boris Gavrilovich replied that he would think it over. Two days later, we were already firing the cannon in which the changes had been made. The shells struck the target correctly. Again I spoke by telephone with Shpitalnyy. The designer replied that he saw no reason for coming. Morozenko was summoned:

"You can sign the drawings of the cannon with the altered muzzle brake?"

"I cannot without Boris Gavrilovich."

Unexpectedly V.M. Ryabikov phoned from Moscow from the People's Commissariat.

"Shpitalnyy and I were just summoned to the State Defense Committee and questioned why the delay in the delivery of the new aviation cannons. Shpitalnyy stated that it was not a problem with the cannon but with the Deputy People's Commissar Novkov who is obviously making the barrel not from steel but from turnips. What is actually the hitch?"

I described the real reason for the delay in delivering the cannons. Then Vasilii Mikhaylovich [Ryabikov] said:

"Phone yourself to the State Defense Committee and explain."

After a brief conversation they replied that measures would be taken and Shpitalnyy would arrive immediately at the plant.

Not more than a day had passed when Boris Gavrilovich telephoned from the transfer railroad station at Agryz which was some 40 km from Izhevsk and began to thank me for the concern for the cannon and even proposed I become his co-author. It turned out that at the station Morozenko had met the designer and explained that the muzzle brake had been designed incorrectly. Shpitalnyy turned up at the plant in a very gracious mood and began talking about abstract questions.

"Boris Gavrilovich, we must deliver the cannon," I interrupted the designer. "Sign the document for making changes in the drawings."

He signed everything and admitted that an error had been made in the design. Several days later all 40 cannons were ready and we began shipping them to the aviation plant. The responsible assignment had been carried out in 1 month and 12 days. The first serially produced Sh-37 appeared at the end of the year. A total of 196 units were produced.<sup>12</sup>

For a final decision, an order was given to conduct comparative firings of the Nudelman and Shpitalnyy

cannons in the presence of representatives from the people's commissariats of defense, armament and the aviation industry. These firings were held several days later at one of the ranges under the supervision of a special commission. The cannon from the design bureau of A.E. Nudelman showed a number of advantages and was considered better. This conclusion was submitted to I.V. Stalin. He ordered that 40 cannons be manufactured in order to test them out in combat.

A.E. Nudelman and A.S. Suranov flew to Izhevsk with a model of the cannon which was tested at the range. I remember the knock on the door of the plant director's officer. At the threshold were Nudelman and Suranov.

"Do you have time for a rest after the trip?"

"No, we are going to the shop."

Several days later, we saw the new cannon on the range. The roar of the rounds sounded like music. In 2 months, by 7 November 1942, all the cannons had been manufactured and tested at the range. But how much tension this caused!

"We," recalled A.E. Nudelman, "spent 2 weeks at the range. The beds on which we slept in turn for 3 or 4 hours a day were just 4 or 5 m from the stands where the cannons were being fired...."

The 40 cannons manufactured ahead of time were dispatched to the aircraft building plant where they were mounted on the LaGG-3 fighters which soon thereafter flew off to the front.

In a short period of time the series production of the NS-37 cannon was organized and this quickly replaced the Sh-37. In 1943, the Izhevsk workers delivered 4,730 new cannons to the aviation plants.<sup>13</sup> As a total the plant supplied the aviators with around 10,000 of them. A majority was mounted on the Il-2 ground attack planes of the aircraft designer S.V. Ilyushin.

Virtually until the end of the war, Germany was unable to develop anything like our heavy-caliber aviation cannons. The Nazi designers mounted on the aircraft ground weapons of 37-, 50- and even 75-mm caliber with manual loading.<sup>14</sup> This showed the backwardness of Nazi technical thought in the area of aviation armament. The appearance of the 30-mm German aviation cannons in the concluding stage of the war could not play a substantial role.

On 5 July 1943, in the Kremlin, on the day of the start of the Kursk Battle, a special meeting was held for defense industry workers. Here the designers were instructed to develop 45-, 57- and even 76-mm aviation cannons. In my office at the People's Commissariat, Nudelman assured us that in the near future a barrel of 45-mm caliber would be mounted on the NS. As for the 57-mm



aviation cannon, it would be harder to solve this problem. While in Izhevsk, I saw how the Nudelman people worked on their "45-mm." They mounted a new barrel, they redesigned the breach, and they used a fragmentation-high explosive shell from a 45-mm antitank gun, the weight of which exceeded 1 kg. If these shells destroyed tanks, then understandably no aircraft existed which could not be downed with a single hit.

Ustinov constantly reminded us:

"We must accelerate the development of the Nudelman cannon in every possible way."

Together with the designers, production engineers and metallurgists, we selected a new steel for the barrel and improved its machining. We developed a new muzzle brake which better dampened the kick, making this the same as in a 37-mm cannon.

Finally, I saw the new cannon in fact. For several seconds it roared until the earth shook. Clumps flew out of the target and thick dust hung over the breastwork made of beams packed with dirt.

The cannon was tested many times. It was mounted on a Yak-9 fighter which was to become the Yak-9K (heavy caliber) as well as on the Il-2 ground attack plane. The design bureau of A.E. Nudelman also developed a 57-mm aviation cannon which, however, due to its large size was not mounted on aircraft, although it was dependable in operation. The cannon was larger than planned. They also developed a 76.2-mm aviation cannon, but this was unnecessary due to the appearance of missile weapons.

Under the difficult conditions of the Great Patriotic War, the Soviet designers together with the plant collectives were able to quickly develop mighty and modern air combat weapons. Neither our Allies or the enemies had such cannons as our 37- and 45-mm. The continuous strengthening of the Soviet aviation armament ensured the successful carrying out of the combat missions by the aviation and brought victory closer.

#### Footnotes

1. "Oruzhiye pobedy" [Weapon of Victory], Moscow, Mashinostroeniye, 1987, pp 284, 315.
2. Ibid., p 286.
3. D.N. Bolotin, "Sovetskoye strelkovoye oruzhiye" [Soviet Firearms], Moscow, Voenizdat, 1986, p 241.
4. "Oruzhiye pobedy," p 286.
5. "Razvitiye aviatsionnoy nauki i tekhniki v SSSR" [Development of Aviation Science and Equipment in the USSR], Moscow, Nauka, 1980, p 442.

6. "Oruzhiye pobedy," p 291.
7. "Razvitiye aviatsionnoy nauki...," p 443.
8. "Oruzhiye pobedy," pp 288, 290.
9. Ibid., p 313.
10. "Razvitiye aviatsionnoy nauki...," p 442.
11. "Oruzhiye pobedy," p 296.
12. Ibid., p 308.
13. Ibid.
14. "Razvitiye aviatsionnoy nauki...," p 446.

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[Article, published under the heading: "Veterans Recall," by Col (Ret) I.G. Dragan: "Across the Hills, Tayga and Swamps of Manchuria"; during the described period the author was a staff officer in the 5th Army]

[Text] During the first days of July 1945, the commander of the 5th Army, which had been relocated to the Far East, Col Gen N.I. Krylov, was summoned to the staff of the Maritime Group. Here MSU K.A. Meretskov who headed the group sketched in the general plan of the operation [operatsiya] to defeat the Japanese imperialists in Manchuria and set the task for the 5th Army. "It was to break through the Pogranichnenskiy Fortified Area erected on the mountain ranges as well as the Volynskiy Fortified Area," wrote K.A. Meretskov later. "I had no doubt as to the combat qualities of the 5th Army. In the spring of the same year it had broken through the fortified areas of Ilmenhorst and Heilsberg in East Prussia and thus came to us not accidentally."

...The Far East has an infinite number of hills, both nameless and called by the most diverse names. Two of them, Verblyud [camel] and Ostraya [sharp], will long be remembered by the commander and staff officers of the 5th Army. They both were powerful strongpoints in the Volinsk Center of Resistance which made up the Pogranichnenskiy Fortified Area<sup>2</sup> and were girdled by escarpments, deep antitank ditches and six rows of wire obstacles on metal stakes. Here were scores of machine gun and weapons firing points. The thickness of the reinforced concrete walls of some of these reached 1.5 m. The permanent emplacements and pillboxes were connected by trenches and communications trenches. Dumps with ammunition, fuel and food were hidden deep under ground.

There were only the most general data about the enemy: the troops of the Maritime Group were opposed by the 3d and 5th Japanese Armies and border units totaling up to 200,000 men. They occupied three defensive lines the last of which was 150-180 km from the forward edge.<sup>3</sup>

"A difficult task has come our way," said Col Gen N.I. Krylov, after returning from reconnaissance to the army command post which now was located 20 km from the frontier on Mount Kabanya. "There is much we must think about."

"The targets are unknown to us, and to fire at random is a mere waste of shells," said the artillery commander, Gen V.I. Fedorov, in support.

"From all appearances we must abandon a frontal attack against Verblyud and Ostraya," said the army Chief of Staff, Gen N.Ya. Prihodko, entering the conversation. "We must outflank them."

"Possibly we could attack the enemy without artillery softening up, at night?" proposed N.I. Krylov. "This will make it possible to catch the Japanese by surprise, to stun them and thereby ensure success of the initial strike. I would like you to think all this through and report your ideas in 2 days."

At the designated time everyone reassembled in the commander's dugout. This time they also called in the chiefs of the combat arms and services. Col Gen Krylov acquainted us with the operation's [operatsiya] plan. In breaking through the Pogranichnenskiy Fortified Area, the leading role was assigned to the LXXII Rifle Corps of Maj Gen A.I. Kazartsev. The army commander had high regard for this taciturn man who possessed exceptional military gifts and strong will and had confidence in him. In addition, serving in the corps were the best trained generals and officers who were known to us from Belorussia, Lithuania and East Prussia, primarily the division commanders A.A. Kazaryan, S.T. Gladyshev and B.B. Gorodovikov. Operating on the other axis were the LXV Corps (commander, Maj Gen G.N. Perekestov) and the XVII Corps (commander, Lt Gen N.A. Nikitin). The XXXXV Corps of Maj Gen A.M. Morozov made up the army second echelon.

The battle formations of the formations were formed up in two echelons (only the 190th Rifle Division fighting on a secondary axis was to advance in a single echelon). The corps and divisions were assigned a large amount of artillery, and its density was brought up to 200 guns and mortars per kilometer of front. The armored fist of the army was strong: up to 30 tanks and self-propelled artillery mounts [SAU] per kilometer of front.<sup>4</sup> Each first-echelon regiment in turn organized its battle formation in two echelons. The forward battalions were to blaze the trail for the main forces of the division.

In the course of the discussion the operation's [operatsiya] plan was supplemented with a large amount of new

details basically concerning the questions of organizing cooperation and combat support. However, the basis remained unchanged: having abandoned the preliminary destruction of the enemy permanent structures and artillery softening up, the enemy was to be attacked with a surprise night thrust. The plan was reported in this form to MSU K.A. Meretskov.

"So you, Nikolay Ivanovich [Krylov]," said the commander of the Maritime Group in surprise, having learned of the operation's [operatsiya] plan, "are going to take a fortified area by night attack—this is a difficult and risky business. And even without artillery softening up...."

"I would request that you permit this to be done by the 5th Army," insisted N.I. Krylov. However, the commander of the Maritime Group continued to doubt the feasibility of the success of night combat. Then Nikolay Ivanovich set out in detail why and how he reached such a decision and referred to examples from the East Prussian Operation.

"Alright," K.A. Meretskov finally agreed, "since you are so insistent, then prepare for the nighttime version."

The week prior to the offensive was for N.I. Krylov and for all the staff of the 5th Army probably the most difficult. For the commanders of the corps and divisions there were staff games on maps, exercises on terrain mock-ups, and "defensive" works were intensified in the entire army zone. As before the start of the Belorussian Offensive Operation, the army feigned intense activities to "upgrade" the defenses in order to mislead the enemy and force it to believe that the Soviet troops did not intend to advance in the near future.

The army commander, the army staff, the commanders of the formations and the political workers also worked hard in the first echelon regiments from which the forward battalions had been assigned. Krylov himself spoke with the officers, sergeants and soldiers, choosing the most experienced ones. In total darkness they were to noiselessly cross the swampy area, infiltrate through the strongpoints into the rear of the enemy defenses and destroy the enemy firing positions. For this they needed not only courageous men but also men of great combat experience. Of course, they found such in the units of the 5th Army which had fought its way through the entire war.

By the beginning of August 1945, the forward battalions were fully up to strength. In addition to rifle subunits these included assault groups each of which had assault combat engineers, manpack flamethrowers, rifle and machine gun squads, an antitank rifle squad, two 45-mm guns, mortars and two SAU. In a word, the assault group was a powerful, well-armed subunit which was capable of combating the reinforced concrete pillboxes.

On 5 August, by a decision of Headquarters Supreme High Command [Hq SHC], the Maritime Group was renamed the First Far Eastern Front. Two days later, the front's commander, MSU K.A. Meretskov, summoned N.I. Krylov to his command post.

"There could be no doubt," recalled Nikolay Ivanovich later, "that this time we would be informed of the start of the offensive. And this is how it happened: Mar Meretskov informed us that simultaneously with our front, combat operations [deystvii] would be commenced by the Transbaykal Front of MSU R.Ya. Malinovskiy and the Second Far Eastern Front of Army Gen M.A. Purkayev. Then came the order: with the onset of darkness on 8 August, to take up the forming-up place. The front military council member T.F. Shtykov who spoke informed us that at the same time the statement of the Soviet government would be announced indicating the reasons for the declaration of war against Japan. Every soldier was to be made aware of this.

The provisions of the instructions of the VKP(b) [All-Union Communist Party (Bolshevik)] Central Committee and the Soviet government underlay the party political work carried out by the commanders, the political bodies, the party and Komsomol organizations in the troops and from these stemmed the specific military-political task of defeating the Kwantung Army, the main force of the Japanese imperialists, and thereby eliminate the center of aggression in the Far East. The political bodies of the units and formations gave great importance to establishing viable party and Komsomol organizations in each company and battery and by the start of the offensive these had significantly been increased in numbers due to the most conscientious soldiers. Just in June-July 1945, in the army troops 1,100 men were admitted to the party and 2,250 to the Komsomol.<sup>5</sup>

One of the important elements in the political and moral-psychological preparation of the men and developing an offensive drive in them was the indoctrinating of the personnel in a spirit of Soviet patriotism and burning hate for the enemy. In addition to lectures and reports, numerous talks and meetings with veterans and Heroes of the Soviet Union were held. Thus, on 12-19 July, in the units of the 144th, 215th and 97th Rifle Divisions, Hero of the Soviet Union, Col Gen N.I. Krylov, spoke to the men. He described the heroism of the Soviet soldiers in the fighting at Lake Khasan and on the Khalkhin-Gol River, the mutual aid in combat, and urged that the combat traditions of the units and formations be strengthened and added to.

In preparing for the operation [operatsiya], the army commander, military council and staff devoted great attention to logistic support. By the start of hostilities, the troops were fully supplied as follows: up to 8-10 daily rations of food and fodder, 4-6 units of fire for ammunition as well as medical supplies for the medical units and facilities.<sup>6</sup>

At around midnight on 8 August, the army commander with the operations [operativnyy] group covertly moved to the observation post located on Elevation Yastreby. It would take 2 hours for the forward detachments to reach Elevation Verblyud, as had been tested out in drills. By this time the combat engineers would have already made passages through the obstacles. The platoons would move through these and by 0315-0320 hours would destroy the enemy strongpoint. "If, of course, the enemy does not spot them sooner and open fire," reasoned N.I. Krylov.

...The hours crept by. The commander looked at his watch. It was 0130 hours in the night. It was raining heavily. In the adjacent room where the signalman was located with his switchboard, the telephone rang. The army commander headed off there.

"It is for you, Comrade Colonel General," said the signalman jumping up upon seeing Krylov.

Gen Kazartsev was reporting. His brief message "they are moving forward" was not calming. How were they moving forward? How many? But Krylov realized that now detailed reports could not be requested.

At 0200 hours, the corps commanders reported that as for now everything was going according to plan. At 0230 and then 0300 hours, there were the same briefs:

"The enemy has not detected us yet...."

Finally, at 0330 hours there came the excited voice of Kazartsev:

"The 3d Battalion from the 707th Rifle Regiment of the 215th Rifle Division under the command of Hero of the Soviet Union, Capt Moskalev, has initiated battle. The company of Capt Shcherbakov has blown up one emplacement with grenades and is presently dealing with the second."<sup>7</sup>

An hour later came a new report from the corps commander:

"The battalion of Capt Moskalev has completely taken the strongpoint on Elevation Verblyud and is continuing to move forward."

Soon thereafter followed reports from the other corps commanders. Everywhere the forward battalions were fighting successfully. The decision of the 5th Army Commander had proven itself completely. The success exceeded even the boldest expectations. The battalion of Capt Moskalev by noon of 9 August, by a surprise attack, defeated the garrison in the military camp located on the western slopes of Elevation Verblyud and had reached the highway 5 km to the west of the state frontier. As a result, the enemy's defensive system was disrupted and support provided for the commitment of the main forces of the division to battle. "The offensive of the Soviet



troops," the chief of staff of the 3d Japanese Army stated subsequently, "was so unexpected that the army staff during the entire night and until 1200 hours on 9 August did not know and could not secure any information of what was happening on the frontier and what was the position of the units."<sup>8</sup>

The forward battalions forced breaches in the Japanese defenses. At 0830 hours, upon orders of N.I. Krylov, the main forces of the formation went over to the offensive. The forward detachments from the divisions moved forward rapidly, driving the enemy from the passes, the road junctions, from ravines and gullies.

On 9 August, the 5th Army had already fulfilled the task of the third day of the operation [operatsiya], and on 11 August the forward detachments from the divisions had crossed the Liewulinghe River (60-80 km from the state frontier).<sup>9</sup> Three days after the start of the offensive, the 5th Army had reached a line which according to the plan was to be attained only on the eighth.

However, this first stage of the operation [operatsiya] was no triumphal march. The well-trained and armed enemy resisted violently. The Japanese Command had built strong reinforced concrete structures along the entire frontier and had mounted the heaviest caliber machine guns and guns in them. The enemy was counting that the Soviet troops advancing against the Pogranichnenskiy Fortified Area would be inevitably held up and bled white and then destroyed by strong counterstrikes.

The Japanese generals had not considered one thing, that the Soviet Command was opposing them with its own tactics which were rapid and preventing the concentration of the required number of troops for a counterstrike both close to the forward edge as well as deep in the defenses. The forward battalions, having carried out the set task, remained in the enemy rear to completely destroy all the permanent structures in the Japanese forward defensive line.

The Soviet troops also thwarted the Japanese plans of launching strong counterstrikes. The highly mobile forward detachments from the first echelon divisions shattered the enemy screens, they bypassed its major centers of resistance and cut the lines of communications, preventing the troops from being concentrated on the essential lines.

The rugged terrain and the almost complete absence of roads impeded the operations [deystvii] of the forward detachments and this had a substantial impact on the rate of advance of the main army forces. Col Gen N.I. Krylov summoned the Chief of the Engineer Troops, Col Ya.Ya. Leyman, and ordered that all the combat engineer units without exception be moved into the battle formations of the first echelon divisions. This forced measure played a positive role as the combat engineers,

in building roads and column tracks where needed, ensured a high rate of advance for the army.<sup>10</sup>

In the evening of 11 August, the Commander of the First Far Eastern Front, K.A. Meretskov, phoned N.I. Krylov at his command post. Having heard the report of the army commander that the army first echelon divisions had reached the Liewulinghe River and had begun to cross to bridgeheads captured by the forward detachments, the marshal demanded:

"Speed up the advance on Mudanjiang!"

It would not be easy to carry out this order. The 5th Army, in pursuing the retreating enemy at a pace of 20-25 km a day, was stretched out almost to the very frontier. The rear services had fallen far behind. Without assembling all the forces of at least the first echelon into a fist, it was impossible to even think about a successful advance. The army commander, certain that the Japanese command, having moved up reserves, would endeavor to stop the army on a previously prepared line, ordered the commander of the LXV Rifle Corps, Gen G.N. Perekrestov, to assign a strong mobile forward detachment and send it against Mudanjiang. In the event that the detachment would encounter organized enemy defenses, it was to enter battle and then with the arrival of the first echelon formations, break through the defensive line.

"On the approach to the Liaoling Range the detachment (76th Tank Brigade of Lt Col V.P. Chaplygin, two rifle battalions on vehicles) encountered organized enemy defenses. The Japanese are counterattacking. According to preliminary data, up to an enemy infantry division has been concentrated here," reported Perekrestov.

Krylov, having heard the corps commander and assessed the situation, ordered:

"Carefully prepare a breakthrough, but don't become tied down and don't lose time. Take over the organization of combat yourself. Go to the detachment commander and have a look at everything in the field. I will be with you in an hour or an hour and a half."

N.I. Krylov left with a feeling of concern for the command post of the LXV Rifle Corps which was located not far from the population point of Mulingzhan. It seemed that the Japanese Command was endeavoring to cover the Mudanjiang axis and if it succeeded in moving up several divisions here, then the 5th Army would find itself in great difficulties....

The commander of the LXV Rifle Corps, in meeting the commander at his command post, was somewhat relieved:

"Comrade Colonel General," reported G.N. Perekrestov, "I have just returned from the commander of the

76th Tank Brigade. He has spoken with captured prisoners. We are confronted with only one enemy division, the 124th Infantry."

The received information pleased Krylov. After brief reflection he said:

"But you can't fight this division long. Others can move up. So report what has already been done and what are your plans."

The corps commander stated that the two rifle regiments had already moved up to the detachment's positions. All the divisional and corps artillery was in position. A plan of battle had also been thought out: after a heavy 30-minute artillery softening up, the available forces would breach the Japanese defenses on a 4-km front. Then as the first echelon formations arrived, the breach would be broadened and the Liaoning Range crossed.

Krylov approved the corps commander's decision. It made it possible to quickly defeat the enemy and reach Mudanjiang. In order to exclude possible unforeseen accidents, the commander of the 5th Army instructed the artillery commander Gen Fedorov who was with Meretskov to allocate all the army artillery to defeat the enemy while the representative of the front aviation was to launch bomb strikes against the enemy armored trains and reserves.<sup>11</sup>

For 30 minutes the artillery moved up to the breakthrough sector roared. Its strike was so strong that it seemed that no one could remain alive where the shells were bursting. However, as soon as the extended infantry lines went into the assault behind the tanks, the enemy put up organized resistance. In the course of fierce combat the enemy defenses were breached. The arriving remaining first echelon units of the LXV Rifle Corps completed the defeat of the 124th Japanese Division. The commander of the Kwantung Army was deprived of the last good line on which he hoped to check the advance of the Soviet troops on the Mudanjiang axis.

Regardless of the defeat suffered, the staff of the Kwantung Army had still not abandoned the idea of closing the "corridor" leading to Mudanjiang. Obeying the orders of the command, the Japanese continuously attacked the units and formations of the 5th Army. In driving off all these assaults, our soldiers and officers demonstrated unflagging tenacity and courage.

The army troops, in stubbornly overcoming the ever-growing enemy resistance, continued to broaden the breakthrough front and advance. On 13 August, its main forces had reached the valley of the Mudanjiang River.

Before the decisive storming of the city of Mudanjiang, N.I. Krylov visited the command posts of the corps and divisions and certain regimental staffs. He was interested in the state of the units and formations, the casualties, the procedure for evacuating the wounded, supply and

the availability of ammunition. He returned to his observation post excited and in a good mood. Yes, the engagement would be difficult and fierce. However, its outcome was already decided....

Formations from the 1st Red Banner Army of Col Gen A.P. Beloborodov had also reached Mudanjiang. This made it possible not only to establish a significant superiority in forces along the entire front but also to attack the enemy grouping (122d Infantry Division, remnants of the 124th, 125th, 126th and 135th Infantry Divisions, detachments of suicide troops as well as other units and subunits) defending the city from several sides simultaneously. The 1st Army was to advance from the north and northeast while the 5th was to attack from the east. Col Gen N.I. Krylov ordered the commander of the LXV Rifle Corps to attack the enemy dug in on the eastern bank of the river, to capture crossings if possible, to cross the water obstacle and then, outflanking the city from the rear, to attack the grouping defending it.

At 0700 hours on 16 August, fierce fighting broke out on the approaches to Mudanjiang and 2 hours later the rifle divisions of the 5th Army had breached the enemy defenses and were approaching the city suburbs. In order to impede the advance of the Soviet troops, the Japanese Command ordered that the two railroad bridges and the highway bridge across the Mudanjiang River be blown up. However, the army commander had anticipated this possibility and ordered the commander of the LXV Corps to capture these. The order was carried out. The infantry and tanks moved across the crossing captured from the Japanese. By 1300 hours, units of the LXV Rifle Corps had broken into the southeastern outskirts of Mudanjiang.<sup>12</sup>

The street battles in the city itself lasted for 4 hours. The enemy clung to each house, to each street. But the ring of troops of the 5th and 1st Red Banner Armies was closing around the enemy grouping. By 1700 hours, Mudanjiang was completely liberated.

The rapid advance of the Soviet troops forced the military leadership of Japan to recognize the senselessness of resistance. In the evening of 17 August, that is, on just the ninth day of the Soviet Army offensive, the Commander of the Kwantung Army, Gen Yamada, turned to the Commander-in-Chief of the Soviet Troops in the Far East, MSU A.M. Vasilevskiy, with a proposal to begin talks on a halt to hostilities. On 18 August, after an exchange of telegrams, the Japanese Command issued the order to surrender.

For participation in the Manchurian Offensive Operation, for skillful command of subordinate troops as well as for personal bravery and valor, the Commander of the 5th Army, Col Gen N.I. Krylov, by an Ukase of the Presidium of the USSR Supreme Soviet of 8 September 1945, received his second Gold Star of the Hero of the

Soviet Union. This was also high praise for the troops which fought under his command in defeating the Kwantung Army.

#### Footnotes

1. K.A. Meretskoy, "Na sluzhbe narodu" [In Service to the People], Moscow, Voenizdat, 1968, p 428.
2. TsAMO SSSR [Central Archives of the USSR Ministry of Defense], folio 326, inv. 310115, file 1, sheet 79.
3. Ibid., inv. 167834, file 5, sheets 153-157.
4. Ibid., sheets 176-180.
5. Ibid., sheets 190-192.
6. Ibid., sheet 203.
7. Ibid., inv. 22091, file 4, sheets 195-196.
8. Ibid., folio 478, inv. 157024, file 10, sheets 75-76.
9. Ibid., folio 326, inv. 216965, file 17, sheets 99-101.
10. Ibid., folio 234, inv. 29358, file 2, sheets 118-120.
11. Ibid., sheet 140.
12. Ibid., folio 69, inv. 22120, file 104, sheet 87.

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#### Text of Stalin's Order 227 "Not a Step to the Rear!"

##### Text of Order

00010001j Moscow VOYENNO-ISTORICHESKIY ZHURNAL in Russian No 8, Aug 88 (signed to press 25 Jul 88) pp 73-75

[Text, published under the heading "Documents and Materials" of the Order of the USSR People's Commissar of Defense, No. 227, 28 July 1942 from Moscow; the document has been published at the request of the readers for the full text of Stalin's famous order "Not a Step to the Rear!"]

[Text] The enemy is constantly throwing new forces into the front, disregarding the great casualties, it is crawling forward and pushing into the interior of the Soviet Union, it is capturing new areas, devastating and destroying our towns and villages, it violates, plunders and kills the Soviet population. Fighting is underway in the area of Voronezh, on the Don, and in the south at the gates of the Northern Caucasus. The German occupiers are pushing to Stalingrad, to the Volga and want at any price to capture the Kuban and the Northern Caucasus with their oil and grain riches. The enemy has already seized Voroshilovgrad, Starobelsk, Rossosh, Kupyansk,

Valuyki, Novocherkassk, Rostov-na-Donu and one-half of Voronezh. A portion of the troops of the Southern Front, in following the panicking soldiers, has abandoned Rostov and Novocherkassk without serious resistance and without orders from Moscow, covering their colors with shame.

The population of our nation which has shown affection and respect for the Red Army is beginning to become disappointed in it and losing confidence in the Red Army while many of them accuse the Red Army that it is surrendering our people to the yoke of the German suppressors while it itself retreats to the east.

Certain unwise people on the front console themselves with talk that we can retreat farther to the east, as we have a great deal of territory, a great deal of land, a large population and our grain will always exist in abundance. By this they seek to justify their shameful conduct on the fronts. But such talk is false and erroneous through and through and only benefits our enemies.

Every commander, Red Armyman and political worker should understand that the means available to us are not limitless. The territory of the Soviet state is not a desert and the people are workers, peasants, intelligentsia, our fathers, mothers, wives, brothers and children. The Soviet territory which the enemy has seized and is endeavoring to seize means grain and other products for the army and the rear, metal and fuel for industry, factories and plants which supply the army with weapons and ammunition and railroads. After the loss of the Ukraine, Belorussia, the Baltic, Donbass and other areas we have a much smaller territory and certainly many fewer people, less grain, metal, plants and factories. We have lost over 70 million in population, more than 800 million poods of grain a year and over 10 million tons of metal a year. We no longer are superior to the Germans either in human reserves or grain supplies. To retreat further means to devastate ourselves and at the same time our motherland. Each new piece of territory abandoned by us will immeasurably strengthen the enemy and immeasurably weaken our defenses and our motherland.

For this reason we must completely eliminate any talk that we are capable of retreating infinitely, that we have a great deal of territory, our country is great and rich, the population numerous and that there will always be abundant grain. Such talk is false and harmful, it weakens us and strengthens the enemy, for if we do not halt the retreat we will be left without grain, without fuel, without metal, without raw materials, without factories and plants and without railroads.

From this it follows that the time has come to end the retreat.

Not a step to the rear! This now should be our main appeal.



We must stubbornly, to the last drop of blood, defend each position and each meter of Soviet territory, cling to each bit of Soviet land and defend it to the last opportunity.

Our motherland is living through difficult days. We must halt and then throw back and defeat the enemy at whatever the price. The Germans are not as strong as it seems to the panic-mongers. The Germans are straining their last forces. To hold out against their blow now, over the next several months, will mean to ensure victory for us.

Can we endure the blow and then push the enemy to the west? Yes, we can, for our factories and plants are now operating excellently in the rear and our front is receiving evermore tanks, aircraft, artillery and mortars.

What do we lack?

We lack order and discipline in the companies, battalions, regiments, divisions, in the tank units and in the air squadrons. This now is our main shortcoming. We should establish strictest order and iron discipline in our army if we wish to save the situation and defend the motherland.

We must no longer tolerate commanders, commissars, political workers, units and formations which without permission abandon their battle positions. We can no longer tolerate a situation when commanders, commissars and political workers allow several panic-mongers to determine the situation on the battlefield when they lead other soldiers into retreat and open the front to the enemy.

Panic-mongers and cowards should be eradicated on the spot.

Henceforth, the demand of not one step to the rear without orders from the superior command should be an iron law of discipline for each commander, Red Armyman and political worker.

The commanders of a company, battalion, regiment or division, the corresponding commissars and political workers who retreat from their battle position without orders from above are traitors of the motherland. Such commanders and political workers must be treated as traitors of the motherland.

This is the order of our motherland.

To carry out this order means to defend our land, to save the motherland, to eradicate and be victorious over the hated enemy.

After their winter retreat under the pressure of the Red Army, when the German troops evidenced a breakdown of discipline, for restoring discipline the Germans initiated certain harsh measures which led to not bad results.

They organized over 100 penal companies from soldiers guilty of disciplinary infractions due to cowardice or instability, they positioned them on the dangerous sectors of the front and ordered them to atone for their sins with their blood. They organized, furthermore, around a score penal battalions from commanders guilty of an infraction of discipline because of cowardice or instability, they deprived them of their orders, they put them on even more dangerous sectors of the front and ordered them to atone for their sins. Finally, they organized special blocking ["zagraditelnyy"] detachments, positioned them behind the shaky divisions and commanded them to execute panic-mongers on the spot in the event of an attempt to abandon positions and in the attempt to surrender. As is known, these measures had their effect and now the German troops are holding out better than they fought in the winter. So it turns out that the German troops have good discipline, although they do not have the noble aim of defending their motherland but only a plunderous goal of conquering a foreign country. Our troops which have the noble goal of defending their desecrated country do not have such discipline and are being defeated because of this.

Should we not learn here from our enemies in the same way that our ancestors in the past learned from their enemies and later won a victory over them?

I feel we must.

The Supreme High Command of the Red Army orders:

1. The military councils of the fronts and above all the commanders of the fronts are:

a) To eliminate unconditionally defeatist attitudes in the troops and with an iron hand check the propaganda that we can and should supposedly retreat further to the east and that supposedly there would be no harm from such a retreat;

b) To remove unconditionally from the position held and remand to Headquarters for trial before a military court those army commanders who permit the spontaneous retreat of troops from held positions, without orders from the front command;

c) To organize within a front from one to three (considering the situation) penal battalions (of 800 men each) where they will send the middle and senior commanders and corresponding political workers of all the combat arms who are guilty of violating discipline out of cowardice or weakness and place them on the more difficult sectors of the front so that they can atone for their crime against the motherland with their blood.

2. The army military councils and primarily the army commanders:

a) Are to remove unconditionally from their posts the commanders and commissars of corps and divisions who

permit the spontaneous retreat of troops from occupied positions without orders from the army command and remand them to the front's military council to be turned over to the military court;

b) Within the army they are to organize three-five well-armed blocking detachments (up to 200 men in each), position them in the immediate rear of the unreliable divisions and oblige them in the event of panic or a disorderly retreat by the division's units to execute panicking troops and cowards on the spot and thereby aid the honest fighters of the divisions to carry out their duty to the motherland;

c) To organize within an army from five to ten (considering the situation) penal companies (from 150 to 200 men in each) where they are to send the rank-and-file and junior commanders guilty of an infraction of discipline due to cowardice or weakness and position them on the difficult sectors of the army in order to allow them to atone for their crimes to the motherland in blood.

### 3. The corps and divisional commanders and commissars:

a) Are unconditionally to remove from the positions held the commanders and commissars of battalions and regiments who have allowed the spontaneous retreat of units without orders from the corps or divisional commander, to lift their orders and medals and remand them to the front military councils to be turned over to the military court;

b) To provide every possible aid and support for the army blocking detachments of the army in strengthening order and discipline in the units.

The order is to be read in all companies, squadrons, batteries, crews and staffs.

**People's Commissar of Defense, I. Stalin**

### Necessity of Order 227 Described

00010001j Moscow VOYENNO-ISTORICHESKIY  
ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 76-78

[Analysis of Order 227 by Army Gen P.N. Lashchenko, Hero of the Soviet Union: "Dictated by Severe Necessity"]

This order did not appear all at once but rather grew and ultimately was a response to the course of the war. And the course of the war at that moment was careening toward tragedy. A majority of you have heard a great deal about Order No. 227, and having become familiar with it for the first time you are still under its sway. I read it the first time near Voronezh, at the staff of the 60th Army which was under the command of Gen I.D. Chernyakhovskiy, almost on the very day it was issued, 26 July 1942. At that time I was the deputy chief of staff

of the 60th Army. I admit that I have been under its sway since I saw it for the first time. Such was the force of this document. And I have frequently wondered where does this force of it lie?

At present, some say that they are stunned by its cruelty as the order introduced the penal companies, the penal battalions and the blocking detachments. In truth they were. There was that. But in 1942 we perceived Order 227 as justice for the panic-mongers and self-seekers, the faint-hearted and those who valued their own lives more than their people, their kin and near ones who sent them to the front. And it happened that the woman, in bidding farewell to her husband leaving for the front said: "Go, defend our children, and I will take your place at the machine tool, I will plow on the tractor, I will cast metal and I will mine ore on the face." These words were heard by the son from the mother, the bride and junior brother.

The laws of war are objective. In any army, a soldier who has thrown down his weapons has always received a severe punishment. The penal companies and battalions, not to make things too complicated, were the same companies and battalions only placed on the most difficult sectors of the front. However, the veterans know how conditional everything is in a war: without fierce fighting the Germans would not have given up a single village, a single town, a single hill. Incidentally, the commanders of the penal subunits were never personnel condemned to serve in them and no one ever considered those so condemned as criminals. Presence in the penal units did not even involve a criminal record.

What did the penal subunits involve? A chance for the man who had retreated, who had been faint-hearted, who had made a mistake, and opportunity to atone for his guilt, and to remove the black spot from himself, often at the price of his own blood. The period of punishment ran from one month to 3 and a wound sustained even on the first day of duty in a penal subunit automatically returned the soldier to his unit, to the same position and with the same military rank.

When Order 227 was announced, the units of our 60th Army were defending themselves against the enemy at Voronezh. The situation was extra difficult. Certainly the enemy had seized half the nation. We were holding out, seemingly, at the limit of the possible. No, I cannot say that there was universal panic and headlong flight. Yes, we were retreating but there was no flight, at least in our army. The order had the ring of a toxin for us where there was one thing—there was nowhere to retreat, not a single step back, otherwise we would perish ourselves and the motherland. Precisely this, I would say, was the main thing in the order and this was accepted with our heart and mind. Whatever the case, the front stabilized along the central street of Voronezh. The enemy did not advance any farther. We began driving it to the west precisely from this street. I would not say that we were fighting poorly, but there had to be a decisive turn and for that reason Order 227 was timely. For a victory over

such a strong enemy as the Nazis, we would have to show more skill, more bravery, more self-sacrifice and unflinchingness. It was a war which mankind had never known before. The destruction of our people could have been its result.

It is true that any order should be carried out precisely and on time. It is also true that the creativity of each commander is apparent within the limits of the set task, the issued order. In this sense, Order 227 was no exception. What I am now saying about an order during a war, about a commander's creativity, is self-understood for a military man. From the very outset Order 227 was viewed on the front as an order not only to further increase exactingness, efficiency but also to strengthen primarily all the indoctrinational work with the personnel, and to fight mercilessly against laxness and inefficiency, irresponsibility and a lack of discipline. Yes, there were the blocking detachments. I do not know if any one of them fired at our own troops, at least on our sector of the front. Even now, I have requested the archival documents on this question but such documents were not found. The blocking detachments were behind the forward edge, they covered the troops from the rear against saboteurs and enemy assault troops, they apprehended deserters which, unfortunately, did exist; they provided order at crossings and sent soldiers who had become separated from their subunits to the assembly points.

Furthermore, the front was receiving new recruits who naturally had not been fired on, as they say, had never smelled powder, and the blocking detachments consisting exclusively of soldiers who had already come under fire and who were the most steadfast and courageous, were a sort of secure and strong shoulder of an elder. It was often the case that the blocking detachments were nose to nose with the same German tanks, the extended lines of German submachine gunners and suffered heavy losses in the fighting. This is an irrefutable fact. It must be realized that on the forward edge everyone was doing one thing—fighting the enemy. At the same time, in battle each person must bring the coward and panic-monger to reason by any means, by any methods, even using weapons. This is the duty of a commander. If he does not carry out his duty, he himself bears extremely severe responsibility. Even a single panicking soldier can lose an entire company and a battalion. Panic is dangerous in its contagiousness and then it becomes a melee. Because of panicking troops, even the best, the boldest and most courageous are lost. And for this reason Order 227 was on the side of the brave so that they would have an opportunity to beat the enemy calmly and judiciously, carefully and professionally.

Recently I happened to read many letters from veterans, including on the question of Order 227. "As a war veteran, I well recall this order of hard times. It was a significant marker on a long and difficult path to victory.... The emboldened enemy, without regard to its losses, was pushing toward Stalingrad.... The situation was becoming ever more critical. And Order 227 appeared at this time, in

July 1942. The order was read in all the units and subunits on the front and its content was known and remembered by all active participants of the Great Patriotic War.... At that time, I was serving as a private in a separate artillery unit and recall well how the continuous retreats had worn down the men and how almost every day new firing positions had to be organized. At that time this was happening to all: the infantrymen, the tank troops, the rank-and-file and the commanders. The leitmotiv of the order was the demand 'not a step to the rear!' This is how I have remembered Order 227 all my life.... It was a strictly military order, and it was harsh for all the men, from the soldier to the marshal. It was caused by the evermore complex situation on the front in the summer of 1942.... Soon after the appearance of the order the retreat of our troops stopped at Stalingrad and then began the offensive.... This is how I recall and remember this order, the harsh truth which everyone should know.... Vladimir Nikolayevich Konkin, CPSU member, veteran of the war and the USSR Armed Forces and engineer lieutenant colonel (retired)."

I could give hundreds and thousands of witnesses of how Order 227 was received on the front. But here I will give just two letters out of the many hundreds of similar ones: "Order 227, in my view, played a definite role in the Great Patriotic War but not a dominant one," writes Nikolay Ivanovich Klimenko, a veteran from the 3d Guards Army. "The dominant role in the defeat of Nazism was played by the military oath given by the men to their motherland, by the high awareness of the soldiers, by the total hate for the enemy and by the colossal patriotism which was inherent to an absolute majority of our soldiers. Order 227 was designed for a limited range of unreliable persons. Some tried to find a certain tragicness in the order. I personally during the period of the war was acquainted with the contents of the order, I subscribed to it, but it did not have any tragic effect on me, nor did it on all my fellow servicemen...."

Or this: "I was at Stalingrad, and our regiment was holding out to the north of the city and then made a breakthrough. Even now I can remember how in the trenches we read the Order of the People's Commissar of Defense No. 227. When I read it, a shudder went down my spine and my hate for the enemy multiplied ten-fold.... Dmitriy Ivanovich Bezruchko." You could not put it better than the soldier said in the trenches of Stalingrad about Order 227: hate for the enemy multiplied ten-fold.

As any participant in the war, I read everything that is now being written about it, including about Order 227. I want to say directly that this order was essential. At that time, great changes occurred in our regiments. We have no reason to lower our eyes to anyone. There is nothing to be ashamed of. We were victorious. Yes, truly, the victory did not come easily to us. But this was a war the likes of which had never been seen before. And we carried out the order "Not a Step to the Rear!"



### Implementation of Order 227

00010001j Moscow VOYENNO-ISTORICHESKIY  
ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 78-79

[Order from A. Shcherbakov of 29 July 1942 to the chiefs of the political directorates of the fronts and districts and to the chiefs of the army political sections]

The People's Commissar of Defense, Comrade Stalin, has issued Order No. 227 of 28 July 1942.

I propose:

1. To personally see to it that the Order of the People's Commissar be immediately issued to the units and subunits, read and explained to all the Red Army personnel. There should not be a single serviceman who is not familiar with the order of Comrade Stalin.

2. To send into the formations and units workers from front, district, army political directorates and political sections of the formations to aid the units in issuing and explaining the order to the Red Army personnel as well as work to carry out the order.

3. The chiefs of the political directorates of the Karelian, Leningrad, Volkhov, Northwestern, Western, Kalinin, Bryansk, Stalingrad, Voronezh, Far Eastern and Transbaykal Fronts are to inform the GlavPU RKKA [Main Political Administration of the Worker-Peasant Red Army] on the work of issuing and explaining the order twice a day: the first time from 0900 hours to 1000 hours over the high-frequency telephone and the second time at 2000 hours by telegraph. The remaining political directorates of the fronts and districts as well as the chiefs of the reserve army political sections are to transmit the information daily by 2000 hours by telegraph.

In the first report they are to state: when the order was received and when it was issued to the Red Armymen, commanders and political workers; facts relating to the explanation of the order. The subsequent reports are to describe how the order has been carried out.

The report should be informative, brief, clear and concrete.

### Misuse of Blocking Detachments

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ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 79-80

[Report by Maj Gen A. Lobachev, Chief of the Political Administration of the Third Baltic Front of 25 August 1944 to the Chief of the Main Political Administration of the Red Army, Col Gen, Comrade Shcherbakov]

Content: On Shortcomings in the Activities of the Front Blocking Detachments.

Under my orders the workers from the front political directorate in August checked on the activities of six blocking detachments (a total of eight blocking detachments).

As a result of this work it was established:

1. The blocking detachments are not performing their direct functions as set out by the Order of the People's Commissar of Defense. A large portion of the personnel from the blocking detachments is employed in guarding the army staffs, protecting communications lines, roads, sweeping the forests and so forth. Characteristic in this regard is the activity of the 7th Blocking Detachment of the 54th Army. According to the list the detachment consists of 124 men. They are used as follows: the 1st Submachine Gun Platoon is guarding the second echelon of the army staff, the 2d Submachine Gun Platoon has been assigned to the CXI Rifle Corps with the task of guarding the communications lines from the corps to the army; a rifle platoon has been assigned to the VII Rifle Corps with the same task; a machine gun platoon is in the reserve of the commander of the blocking detachment; nine men are at work in the sections of the army staff, including the platoon commander, Sr Lt Gonchar who is the commandant of the army rear services directorate; the remaining 37 men are used at the staff of the blocking detachment. Thus, the 7th Blocking Detachment is not concerned at all with blocking service. The same situation exists in the other blocking detachments (5th, 6th, 153d, 21st, 50th).

In the 5th Blocking Detachment of the 54th Army, out of the TOE of 189 men, just 90 are guarding the army command post and are in blocking service while the remaining 99 men are used in various jobs: 41 men in servicing the AKhO [administrative-housekeeping section] of the army staff as cooks, cobblers, tailors, storehousemen, clerks and others; 12 men are in the sections of the army staff as messengers and orderlies; 5 men are at the disposal of the staff commandant and 41 men are serving the staff of the blocking detachment.

In the 6th Blocking Detachment, of the 169 men, 90 soldiers and sergeants are used in guarding the command post and the communications lines and the remainder are in administrative jobs.

2. In a number of the blocking detachments, the TOE of the staffs have become extremely inflated. Instead of the prescribed TOE of 15 men of officer, NCO and rank-and-file personnel, the staff of the 5th Blocking Detachment numbers 41 men; at the 7th Blocking Detachment it is 37 men; in the 6th Blocking Detachment 29 men; in the 153d Blocking Detachment, 30 men, and so forth.

3. The army staffs are not exercising supervision over the activities of the blocking detachments, they have put them to work for themselves, they have reduced the role of the blocking detachments to the status of ordinary commandant companies. At the same time the personnel

of the blocking detachments has been recruited from the best, tested soldiers and sergeants, the participants of many battles who have been awarded orders and medals of the Soviet Union. In the 21st Blocking Detachment of the 67th Army, of the 199 men 75 percent are combat veterans and many of them have been decorated. In the 50th Blocking Detachment, 52 men have been decorated for combat achievement.

4. The lack of supervision by the staffs has led to a situation where in a majority of the blocking detachments military discipline is on a low level and the men are dissolute. Over the last 3 months in the 6th Blocking Detachment, 30 punishments have been handed down to soldiers and NCOs for a flagrant infraction of military discipline. The situation is no better in the other detachments....

5. The political sections and the deputy chiefs of the army staffs for political affairs have forgotten about the existence of the blocking detachments and do not direct the party political work....

On the disclosed shortcomings in the activities of the blocking detachments on 15 August, I reported to the front military council. Along with this, I issued instructions to the chiefs of the army political sections on the need for a fundamental improvement in party political and indoctrinational work in the blocking detachments; a revival of internal party activities of the party organizations; a strengthening of work with the party and Komsomol aktiv; the holding of lectures and reports for the personnel; improving the cultural services for the soldiers, NCOs and officers of the blocking detachments.

Conclusion: In their majority the blocking detachments are not carrying out the tasks set out by the Order of the People's Commissar of Defense No. 227. The guarding of staffs, roads, communications lines, the performing of various administrative jobs and assignments, the serving of commanders and superiors, supervision over the internal procedures in the army rear services in no way comprise the functions of the front's blocking detachments.

I feel it necessary to raise the question before the people's commissar of defense on reorganizing or disbanding the blocking detachments as having lost their importance under the current situation.

#### **Order Disbanding Blocking Detachments**

00010001j Moscow VOYENNO-ISTORICHESKIY  
ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) p 80

[Order of the People's Commissar of Defense No. 0349  
of 29 October 1944 in Moscow]

**Content: On the Disbanding of the Separate Blocking  
Detachments.**

In line with the altered general situation on the fronts, the need for further maintaining the blocking detachments has disappeared, I order:

1. By 13 November 1944, to disban the separate blocking detachments.

The personnel of the disbanned detachments is to be employed as reinforcements of the rifle divisions.

2. The disbanding of the blocking detachments is to be reported on by 20 November 1944.

**People's Commissar of Defense, MSU I. Stalin**

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#### **Use of Mines by Russian Troops on Lower Danube in 1877**

00010001k Moscow VOYENNO-ISTORICHESKIY  
ZHURNAL in Russian No 8, Aug 88 (signed to press  
25 Jul 88) pp 81-83

[Article, published under the heading "Scientific Papers and Information," by A.S. Sinin, doctor of historical sciences, professor: "Employment of Mines by Russian Troops on the Lower Danube in 1877"]

[Text] Long before the start of the Russo-Turkish War of 1877-1878, the Field Staff of the Russian Army had worked out a plan to cross the Danube. As the chief means for combating the Turkish River Fleet<sup>1</sup>, they planned, in addition to setting mine obstacles, to employ steam launches equipped with mines. For this purpose, by January 1877, in Kishinev, two detachments of sailors had been organized: the Baltic, or the detachment of the Guards Crew consisting of four companies (two Guards Crews, a composite lifeguard of a combat engineer battalion and a training electric mine company with a total of 458 men); the Black Sea consisting of two companies of fleet crews (197 men).

The Baltic Detachment was assigned for operations [deystvii] on the Middle Danube and the Black Sea on the Lower Danube. They had available 14 steam launches and 10 rowed launches, 5 boats and 14 sailboats which had been delivered by rail. The Baltic Detachment included 10 team-powered launches, including the fastest and largest metal-hulled launches, the "Shutka" and "Mina" the engines of which at 8-10 hp could reach a speed of up to 16 knots (the power of the engines of the remaining launches was 2.5-5 hp and they had significantly lower speed), 5 boats, 8 rowed launches and 8 boats. Each launch carried 8 mines (pole and towed), the charge of each of which reached 40 kg of powder. The Black Sea Detachment received 4 steam launches and 6 boats. The uneven distribution of forces and vessels was explained by the importance of the

Middle Danube, where the main forces of the operational [deystvuyushchiy] army intended to cross as well as by the absence of our own craft available on the Lower Danube.

In the fight for the crossings over the Danube, it was essential to defeat or at least paralyze the Turkish river flotilla. For this it was essential: to set mine obstacles in order to restrict the enemy warships in space and prevent them from reaching the crossing areas; to set up batteries at the most important places along the left bank of the Lower and Middle Danube; to carry out attacks on the flotilla vessels. The successful execution of these measures would be possible only with close cooperation between the sailors, artillery and infantry.

The mining of the Danube started from its lower courses, where somewhat before the actions of the main forces the Russian troops were to cross for the purpose of a feint. Moreover, the command of the Russian army feared the appearance of Turkish warships here, since the enemy which was supreme on the Black Sea could concentrate a strong squadron at Sulina and at any moment introduce it up the Danube.

On 28 April<sup>2</sup>, the trains arrived at Barbosh Station delivering the river vessels and personnel from the Black Sea Detachment under the command of Capt Lt S.K. Bekleshov. A larger portion of the detachment which included the two mining crews immediately began setting out obstacles on the flanks of the sector of the Lower Danube in the area of the towns of Reni and Brailov (Braila), where the feint crossing had been planned. Initially they set a mine obstacle consisting of 21 contact and electric mines at Reni. A second obstacle (two lines of 5 electric mines each) was set at the mouth of the Seret River at the Barbosh Bridge.<sup>3</sup> Simultaneously on the enemy shore they organized mine stations where the lines of electric mines could be activated. All the work was covered by 9 batteries of field artillery which had been mounted ahead of time at three places: on the bank of the Seret River near the Barbosh Bridge, in the mouth of the Prut River and by the town of Reni. The laying of the mine obstacle in the mouth of the Seret River was actively aided by the steam-powered launches "Tsarevich" and "Kseniya" which were under the command of Lts F.V. Dubasov and A.P. Shestakov.

The enemy did not impede the setting of the obstacles at Reni and the Barbosh Bridge and only on the 10th day of the war did its ships begin to be active. During the night of 3 May and then on 4 and 6 May, several Turkish monitors approached Brailov and Reni but, encountering fire from the Russian batteries, quickly moved off.

By 8 May, the field batteries which had been temporarily mounted at Brailov and Reni were replaced by siege guns. Under their cover, during the period from 9 through 19 May, mine defenses were set out below and above Brailov as well as three other obstacles consisting of 49 electric and 10 contact mines at the outlet of the

Macin Channel into the main channel of the Danube. For protecting these they organized a guardship service which was stood by the steam launches and in this manner they established complete control over the section of the river in the area of Reni—Galati—Brailov. Between these points there was safe communication and this facilitated the crossing of the troops and the work of preparing the crossing of the Lower Danube. Unfortunately, the attempt to completely keep enemy warships out of the Macin Channel by mining the entrance of the latter at Gura-Ialomiti and undertaken on 22-24 May was not successful as the Russian sailors had to limit themselves to setting two false mine barriers.<sup>4</sup>

The artillery troops assisted in successfully combating the Turkish river fleet. During the day of 11 May, the battery under the command of Lt S.I. Samoylo with two rounds accurately straddled a large twin-turret armored enemy corvette the "Lutfi-Jelil" which was attempting to prevent the setting of an obstacle at Brailov. The corvette was blown into the air from the exploding of the powder magazine. The Russian steam launches which were sent from Brailov were able to save only one wounded sailor and take the Turkish vice-admiral's flag from the mast.

Soon after this, Lt F.V. Dubasov, the commander of the steam launch "Tsarevich," proposed a plan for a night attack on the Turkish vessels moored in the Macin Channel and impeding the crossing of the Russian troops in the Galati—Brailov area. In accord with the designated plan, during the night of 26 May, the launches "Tsarevich," "Kseniya," "Dzhigit" and "Tsarevna" left Brailov. Moving slowly close to shore in a single-column formation, they reached the Macin Channel and at 0230 hours in the middle of it detected two monitors (a large and a small) and a twin-stack steamer. The "Tsarevich" attacked the large enemy monitor which was getting up steam. Lt F.V. Dubasov, in endeavoring to neutralize the stern guns of the enemy and deprive the monitor of the opportunity to get underway, decided to ram its stern. When the launch was 50 m away from the monitor, a sentry sounded the alarm. But the "Tsarevich," in approaching the port side of the monitor, dealt it a starboard pole-mine attack in the underwater portion of the stern. The launch was inundated with water from the heavy explosion. It went into reverse and the crew began to bail it out. The enemy monitor was sinking in the stern, continuing to stay underway. Its crew fired intensely from the turret weapons at the launches. Under full power and under the fire of three enemy vessels the launch "Kseniya" (commander, Lt A.P. Shestakov) rammed the monitor in the middle of its port side and it immediately sank. The Russian launches returned to Brailov without losses.<sup>5</sup>

The sunken monitor "Saifi" was one of the two large, single-turret ships of the Turkish flotilla. Only 9 men were rescued from the crew of 37 sailors and officers.

The success of the group nighttime battle of the mine launches to a significant degree was ensured by the



careful preparations, accurate calculations combined with the precise execution of the adopted plan, as well as the exceptional tenacity and courage of the crews. The combat convincingly demonstrated the effectiveness of mine weapons and instilled confidence in the Russian sailors in the high combat qualities of the mine launches. The loss of the "Saifi" after the sinking of one of the largest vessels on the Danube, the "Lutfi-Jelil" by the artillery troops, further weakened the Turkish flotilla and had a negative effect on the morale of its personnel. The commander of the Macin Squadron, Delaver Pasha, having abandoned the vessels, fled to Rusuk. In his place, Arif Pasha arrived in the town of Macin and he immediately led the entire squadron through the false barriers from the Macin Channel to Rusuk. In this manner the Macin garrison was deprived of flotilla support and after the crossing of the Russian forces at Galati, abandoned its positions without a fight.<sup>6</sup>

In order to prevent the return of the Turkish warships to the Macin Channel, on 7 June a small flotilla under the command of Staff Capt N.S. Roguli was sent to mine the entrance to it at Gura-Ialomiti and nearby (in the main channel of the Danube). This group included the steamer "Zagrazhdeniye" which served as the mine depot, the gunboat "Velikiy Knyaz Nikolay", and the launches "Tsarevich," "Kseniya," "Dzhigit" and four wooden barges towed by the steamer and gunboat.<sup>7</sup>

At dawn of 8 June, the gunboat with the launches "Tsarevich" and "Kseniya," going out on reconnaissance, discovered at Girsovo (Hirsova) two enemy monitors and two steamships. One of the monitors headed straight toward the Russian vessels. The latter also continued to close. The gunboat "Velikiy Knyaz Nikolay" opened fire from the bow gun. The Turkish monitor quickly turned away and retreated to Girsovo. The enemy batteries positioned on the hills near Girsovo subjected the gunboat and launch to intensive shelling. Having determined the sphere of enemy fire, the Russian vessels returned to Gura-Ialomiti without losses. During the second half of the day, the Russian flotilla set out to set obstacles in the main channel of the Danube and carried out the mission unimpeded. Toward evening, opposite Giska-Mare Island, the sailors set an obstacle of 8 contact mines and somewhat later reinforced this with one other barrier of 4 contact mines set in the Danube—Borca Channel (the left tributary at Girsovo) where it emerged in the main channel. On the following day early in the morning, they set 7 contact mines in the Macin Channel and by evening the flotilla had returned to Brailov.<sup>8</sup>

Thus, on the eve of the crossing of the Russian troops on the Lower Danube, a significant segment of the river was successively cleared of enemy vessels (from Reni to Girsovo), and this ensured the unobstructed erecting of a bridge across the Danube at Brailov. This made it easier for the Lower Danube Detachment to cross the river.

Having carried out the mission, the sailors took a direct part in supporting the crossing of the Russian troops

across the Danube in the Galati—Brailov area and undertaken during the night of 22 June 1877. On the eve of this the forces of the Black Sea Detachment, 5 transport and fighting vessels and 2 steam launches built and threw up at Brailov a raft bridge some 525 m long. Moreover, with the aid of the floating equipment concentrated at Brailov and Galati (3 steamships, 8 barges, 45 wooden pontoons, 15 rafts and 250 boats), a landing force was landed consisting of the forward units of the 18th Infantry Division (69th Ryazan, 70th Ryazhsk Regiments and the guns of the 18th Artillery Brigade).<sup>9</sup>

At dawn of 22 June, under the leadership of Lt F.V. Dubasov, the Black Sea Detachment successfully conducted a feint in the aim of distracting the enemy's attention and preventing the shifting of its weapons from Macin to the Bujak Peninsula, where the Russian troops were landing. The steamship "Velikiy Knyaz Konstantin," the steam launches "Tsarevna" and "Ptichka" approached Macin, they fired on the Turkish battery, and drew the fire of the enemy artillery to themselves. The guns delivered by the sailors on rafts played a crucial role in changing the course of the engagement on the Bujak Peninsula, where the forward units of the landing force repelled attacks by enemy forces which were twice as strong. The artillery fire supported the going over to the offensive by the Russian infantry which subsequently occupied the entire Bujak Peninsula and had firmly dug in on the right bank of the Danube. During the night of 23 July, a detachment of sailors under the command of Lt M.F. Nikonov occupied the town of Macin which had been abandoned by the Turkish troops. Over the bridge erected at Brailov, by 6 July, the main forces of the Lower Danube Detachment had crossed to the right bank. Having occupied Northern Dobrudja on 16 July, the detachment fully carried out the task set for it with the Russian sailors playing a major role in the successful execution of this.

#### Footnotes

1. The Turkish river flotilla consisted of 46 fighting and transport vessels, including 7 large and small monitors armed with 77 guns.
2. All the dates are given in the new style.
3. V. Chubinskiy, "Ob uchastii moryakov v voyne s Turtsiyey 1877-1878 gg." [On the Participation of the Sailors in the War Against Turkey of 1877-1878], St. Petersburg, 1889, p. 12.
4. Ibid., pp. 18-21.
5. "Vzryv turetskogo monitora 'Seyfi' 14 maya 1877 goda" [Explosion of the Turkish Monitor "Saifi" on 14 May 1877], St. Petersburg, 1902, p. 98.
6. Ye.A. Arens, "Rol flota v voyne 1877-1878 gg." [The Role of the Fleet in the War of 1877-1878], St. Petersburg, 1903, p. 44.

7. Ibid., p 45.

8. Ibid.

9. K.L. Kirpichev, "Voyna 1877-1878 gg. Perepravly cherez Dunay v inzhenernom otnoshenii" [The War of 1877-1878. Engineer Aspects of the Crossings Over the Danube], St. Petersburg, 1903, pp 16-17.

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Articles Not Translated from  
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